Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of **DETERMINATION OF RATES AND TERMS FOR DIGITAL PERFORMANCE OF SOUND RECORDINGS AND MAKING OF EPHEMERAL COPIES TO FACILITATE THOSE PERFORMANCES (WEB V)**	**Docket No. 19–CRB–0005–WR (2021–2025)**

SERVICES' JOINT UNOPPOSED MOTION
FOR LEAVE TO FILE CORRECTED PUBLIC VERSION
OF PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Pandora Media, LLC, Sirius XM Radio Inc., Google LLC, the National Association of Broadcasters, and the National Religious Broadcasters Noncommercial Music License Committee (collectively, the "Services") respectfully move for leave to submit the attached Corrected Public Version of their Joint Proposed Findings of Fact and Conclusions of Law (Services' Joint Proposed Findings"). SoundExchange has consented to this motion.

The Corrected Public Version of the Services' Joint Proposed Findings, attached as Exhibit A to this motion, includes several additional redactions that were inadvertently omitted from the original Public Version filed October 9, 2020. These corrections are in furtherance of the Protective Order dated June 24, 2019, and the Judges have the statutory authority to permit them. *See* 17 U.S.C. § 801(c) (empowering the Judges to "make any necessary procedural or evidentiary rulings in any proceeding under this chapter").

CONCLUSION

For the foregoing reasons, the Services respectfully request that the Judges grant their unopposed motion and enter the attached Proposed Order replacing the previously-submitted

Public Version of the Services' Joint Proposed Findings with the attached Corrected Public Version.

October 12, 2020

Respectfully submitted,

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Exhibit A

CORRECTED
PUBLIC VERSION

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of: **Determination of Rates and Terms for Digital Performance of Sound Recordings and Making of Ephemeral Copies to Facilitate those Performances (*Web V*)**	**Docket No. 19-CRB-0005-WR (2021-2025)**

SERVICES' JOINT PROPOSED
<u>FINDINGS OF FACT AND CONCLUSIONS OF LAW</u>

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Ford, George	Designated Written Direct Testimony of George Ford (*SDARS III*)	SoundExchange	5617*	Ford WDT (*SDARS III*)
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Pittman, Robert	Written Direct Testimony of Robert Pittman	NAB	2152*	Pittman WDT
Ploeger, Travis	Written Rebuttal Testimony of Travis Ploeger	SoundExchange	5625*	Ploeger WRT
Poleman, Rom	Written Direct Testimony of Tom Poleman	NAB	2153*	Poleman WDT
Reiley, David	Corrected Written Direct Testimony of David Reiley	Sirius XM/ Pandora	4091*	Reiley CWDT
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Ritz, Joseph	Written Rebuttal Testimony of Joseph Ritz	NAB	2162*	Ritz WRT
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Shapiro, Carl	Second Corrected Written Direct Testimony of Carl Shapiro	Sirius XM/ Pandora	4094*	Shapiro SCWDT
Shapiro, Carl	Written Rebuttal Testimony of Carl Shapiro	Sirius XM/ Pandora	4107	Shapiro WRT
Sherwood, Mike	Written Direct Testimony Mike Sherwood	SoundExchange	5620*	Sherwood WDT
Simonson, Itamar	Corrected Written Rebuttal Testimony of Itamar Simonson	SoundExchange	5608*	Simonson CWRT
Steinberg, Richard	Amended Written Direct Testimony of Richard Steinberg	NRBNMLC	3060*	Steinberg AWDT
Steinberg, Richard	Corrected Written Rebuttal Testimony of Richard Steinberg	NRBNMLC	3064*	Steinberg CWRT
Strohm, John	Written Direct Testimony John Strohm	SoundExchange	5622*	Strohm WDT
Tucker, Catherine	Written Direct Testimony of Catherine Tucker	SoundExchange	5604*	Tucker WDT

Witness Name	Description	Party	Trial Exhibit	Citation Format
Tucker, Catherine	Written Rebuttal Testimony of Catherine Tucker	SoundExchange	5605*	Tucker WRT
Westergren, Timothy	Written Direct Testimony of Timothy Westergren (*Web IV*)	Sirius XM/ Pandora	4106	Westergren WDT (*Web IV*)
Wheeler, Leonard	Written Direct Testimony of Leonard Wheeler	NAB	2157*	Wheeler WDT
Williams, Tres	Written Direct Testimony of Tres Williams	NAB	2154*	Williams WDT
Willig, Robert	Corrected Written Direct Testimony of Robert Willig	SoundExchange	5600*	Willig CWDT
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Sirius XM Radio Inc. ("Sirius XM") and its wholly-owned subsidiary Pandora Media, LLC (together with its predecessor Pandora Media, Inc., "Pandora"), Google LLC ("Google"), the National Association of Broadcasters ("NAB"), and the National Religious Broadcasters Noncommercial Music License Committee (the "NRBNMLC") (collectively, the "Services") hereby jointly submit the following proposed findings of fact and conclusions of law[2] regarding issues common to the Services.[3]

I. GOVERNING STANDARD

A. The Willing Buyer/Willing Seller Standard

1. Under the governing provisions of sections 801-805 and 114 of the Copyright Act, the Judges are charged with establishing rates and terms that "most clearly represent the rates and terms that would have been negotiated in the marketplace between a willing buyer and a willing seller." 17 U.S.C. § 114(f)(1)(B). In doing so, the Judges "shall base their decision on economic, competitive, and programming information presented by the parties," and they "may consider" the rates and terms "for comparable . . . services and comparable circumstances under voluntary license agreements." *Id.* Section 112(e)(4), addressing ephemeral copies, likewise requires the Judges to "establish rates that most clearly represent the fees that would have been negotiated in the marketplace between a willing buyer and a willing seller." 17 U.S.C. § 112(e)(4).

2. The "willing buyers" in the hypothetical market the Judges are tasked with replicating are noninteractive webcasters with features that qualify them for the statutory license (although the hypothetical market presumes that no such statutory license exists). The "willing

[2] Pursuant to 37 C.F.R. § 351.14(c), paragraphs 1-11, 25, 46, 57-60, 304-305, and 328 constitute proposed conclusions of law. The remaining paragraphs constitute proposed findings of fact or application of law to facts.

[3] Pursuant to the Judges' Sept. 23, 2020 Order, Sirius XM, Pandora, Google, NAB, and the NRBNMLC concurrently submit separate proposed findings regarding issues specific to each service.

sellers" in the hypothetical market are individual record companies offering catalog-wide licenses to their complete repertoires of sound recordings to publicly perform those recordings subject to the "sound recording performance complement" set forth in section 114(j)(13) and to make the associated reproductions to facilitate those performances. *See* 17 U.S.C. § 114(j)(13); *Determination of Royalty Rates for Digital Performance Right in Sound Recordings and Ephemeral Recordings*, 79 Fed. Reg. 23102, 23110 (Apr. 25 2014) ("*Web III Remand*"); Shapiro SCWDT at 5-6; Willig CWDT ¶ 6.

3. The "willing buyer/willing seller" standard is the single standard governing this proceeding. *See* Order of the Register, Docket No. 2000-9 CARP DTRA 1 & 2, at 5 (July 16, 2001) ("Register's Order"). While section 114(f)(1)(B) enumerates certain factors for the Judges' consideration, those factors do not "define[] the standard for setting the rates"; rather, they are non-exclusive considerations that may, along with other evidence presented by the parties, go to the question of what a willing buyer and willing seller would negotiate. *Id.*; *see also Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings*, 81 Fed. Reg. 26316, 26331-32 (May 2, 2016) ("*Web IV*") (noting that the statutory considerations may be found "*within*," not separate from, "economic, competitive, and programming information presented by the parties").

4. The rates and terms established by the Judges "shall distinguish" among different types of services. *SoundExchange, Inc. v. Copyright Royalty Bd.*, 904 F.3d 41, 47 (D.C. Cir. 2018) ("*Web IV Appellate Decision*"). Rate differentiation is appropriate when the services occupy "distinct segment[s] of the noninteractive webcasting market." *Id.* at 58 (citing *Digital Performance Right in Sound Recordings and Ephemeral Recordings*, 72 Fed. Reg. 24084, 24097 (May 1, 2007) ("*Web II*")). Evaluating whether market segmentation exists involves considering

a number of factors, including whether comparable agreements have been negotiated in which the relevant services paid different prices. *Id.*

5. In carrying out the statutory directive, one of the approaches the Judges have utilized is a benchmark-based process. The Judges typically have identified relevant benchmarks and appropriate adjustments, used the accepted benchmarks and adjustments, to establish a "zone of reasonableness," and then fixed the statutory license rate within that zone. *Web IV Appellate Decision*, 904 F.3d at 47 (citing *Web III Remand*, 79 Fed. Reg. at 23110). This benchmark approach has been applied to each segment of webcaster services for which the Judges set distinct rates. *Id.*

6. Another approach to determining a willing buyer/willing seller rate is the "opportunity cost approach" utilized in *SDARS III*. *In re Determination of Royalty Rates and Terms for Transmission of Sound Recordings by Satellite Radio and "Preexisting" Subscription Services*, 83 Fed. Reg. 65210 (Dec. 19, 2018) ("*SDARS III*"). In that proceeding, rather than make adjustments to relevant benchmarks, the Judges for the first time adopted a rate-setting methodology that relied principally on an application of an opportunity-cost methodology—*i.e.*, a determination of the royalties that a given record company forgoes from other forms of licensing as a result of licensing the applicable statutory service. *See id.* at 65231.

B. The Requirement of Effective Competition

7. Regardless of the particular approach or methodology used, it is well-established under CRB precedent—and undisputed here—that the rates and terms established by the Judges should be those that would prevail in a hypothetical market that is effectively competitive. *See,*

e.g., Willig CWDT ¶ 6; Orszag WDT ¶ 17; Shapiro WRT at 4;[4] *Web IV Appellate Decision,* 904 F.3d at 57-58.

8. In *Web IV*, having considered the plain meaning of the statute, the clear statutory purpose, applicable prior decisions, and the relevant legislative history, the Judges "conclude[d] that they are required by law to set a rate that reflects a market that is effectively competitive." *Web IV*, 81 Fed. Reg at 26332. The D.C. Circuit affirmed the rate determination, holding that the Judges' interpretation of the willing buyer/willing seller standard to require a rate reflecting effective competition was reasonable and entitled to deference. *Web IV Appellate Decision*, 904 F.3d at 57. The Court specifically noted with approval the Board's determination that section 114(f)(2)(B)'s reference to a willing buyer/willing seller framework "could be understood to allow adjustments to offset the existence of market power," as buyers and sellers cannot be "willing" "if they are coerced to agree to a price through the exercise of overwhelming market power." *Id.* at 56-57.

9. Again in *SDARS III*, the Judges noted that they "must review the record in this proceeding to identify a means to establish rates that are consistent with effective competition." *SDARS III*, 83 Fed. Reg. at 65238.

10. Most recently, the D.C. Circuit in its review of the *Phonorecords III* determination reiterated the importance of effective competition and the corresponding need to offset unchecked market power in setting appropriate royalty rates. *See Johnson v. Copyright Royalty Bd*., 969 F.3d 363, 372 (D.C. Cir. 2020). Remanding for further proceedings to correct the Board's failure to do so, the Court emphasized that "the sound recordings market is a

[4] Throughout these Proposed Findings, all citations to pages of trial exhibits (including written testimony) refer to the pagination stamped on the exhibit for trial, not the internal pagination of the native document. For example, the citation to page 4 of the Shapiro WRT (Trial Exhibit 4017) refers to the page stamped "4107.4."

complementary oligopoly" in which "sound recording copyright holders can wield their considerable market power to extract excessive royalties"—the only limit to their propensity to do so being that the copyright owners would at least "want the existing interactive streaming services to survive." *Id.* Indeed, as the majority had noted in its underlying determination, "[r]ecord companies could, if they so chose, put [interactive streaming services] out of business entirely." *Determination of Royalty Rates and Terms for Making and Distributing Phonorecords*, 84 Fed. Reg. 1918, 1934 n. 75 (Feb. 5, 2019) ("*Phono III*"). The Court therefore held that the treatment of total content cost in the majority opinion failed the willing buyer/willing seller standard because "by eliminating any cap on the total content cost prongs, the Final Determination yoke[d] the mechanical license royalties to the sound recording rightsholders' *unchecked market power*." *Johnson*, 969 F.3d at 382 (emphasis added).

11. While "metaphysical perfection in competitiveness" is not required, the statutory rates must not reflect "pure monopoly" or, worse still, complementary oligopoly. *See Intercollegiate Broad. Sys., Inc. v. Copyright Royalty Bd.*, 574 F.3d 748, 757 (D.C. Cir. 2009). The middle ground of effective competition, however "fuzzy," "must be applied" in these proceedings. *SDARS III*, 83 Fed. Reg. at 65238. The Services' economic experts have provided a framework for doing just that. Lip service aside, SoundExchange's economic experts have not. *See infra* § II.

12. An effectively competitive market is one in which no individual record company is a "must-have" for the licensee—meaning that in the event the licensee loses access to the record company's repertoire, the licensee can rely on a sufficiently good substitute in order to preserve the commercial viability of its music service. Shapiro WRT at 4; 8/18/20 Tr. 2637:16-19 (Shapiro). Without this ability to at least *survive* a failure to reach agreement with the record

company, there cannot be effective competition; the mere fact that a service may have its own "points of bargaining leverage" and use them to "negotiate intensely against" even a "must-have" record company does not transform the market into one that reflects the workings of effective competition. Shapiro WRT at 4; *see also* Peterson AWRT ¶ 66 (explaining that, in situations where "the label would survive cutting off the on-demand streaming service" but the service would "[redacted]," the "label retains the upper hand in negotiations"); Leonard CWRT ¶ 77 ("[A] label would have a greater ability to wait out the impasse, given that it would continue to receive royalties from other sources, whereas the service's entire subscription revenues would potentially be at risk . . . .").

13. A market that is monopolized or controlled by a cartel—or a "complementary oligopoly"—cannot be effectively competitive. Shapiro WRT 5. In fact, complementary oligopoly rates, which result from multiple record companies being "must-haves," lead to royalty rates that are even higher than the rates that would be charged by a single monopolist controlling the licensing of all recorded music. *Id.* at 6; 8/18/20 Tr. 2642:22-2643:2 (Shapiro). A *lack* of active coordination among must-have record companies therefore does *not* mean that the market is effectively competitive. 8/18/20 Tr. 2643:10-22 (Shapiro). Indeed, in a market consisting of a complementary oligopoly (such as the licensing market for interactive music streaming services), active coordination by must-have suppliers would lead to lower prices, rather than higher ones. Shapiro WRT at 4, 56-58 & figs. 9, 10.

14. As Professor Shapiro explained, the hallmark of an effectively competitive market is rival suppliers engaged in regular and meaningful price competition for the patronage of buyers. Typically, this competition is defined by the presence of price competition, which involves some sellers offering lower prices than their rivals in order to increase market share.

Similarly, buyers would then award a greater share of their purchases to those suppliers offering them better prices. Thus, in the music licensing context, price competition would occur when a record company offered a lower royalty rate to a music service in order to increase its play share relative to other labels. *See* Shapiro WRT at 5; 8/18/20 Tr. 2650:2-9; 2651:12-24 (Shapiro); Peterson AWRT ¶ 74; Leonard CWRT ¶ 60.

15. Professor Shapiro testified further that there are two ways in which price competition can be manifested in the music licensing industry: carriage competition and steering competition. These may co-exist, or they may arise separately, depending on market conditions. Shapiro SCWDT at 11-14; 8/18/20 Tr. 2650:2-9; 2651:12-2652:17 (Shapiro).

16. Carriage competition is created by a webcaster's threatening to drop a record company's repertoire from its service entirely if it determines that the record company's royalty rate is unreasonably high; this allows the music service to extract a lower royalty due to its resultant bargaining power. Shapiro SCWDT at 12-13; 8/18/20 Tr. 2651:12-24 (Shapiro). There can be no carriage competition among "must-have" record companies, since the music service would be unable to survive without access to the record company's music and the threat to drop the label therefore would not be credible or confer leverage. Shapiro SCWDT at 13; 8/18/20 Tr. 2651:25-2652:17 (Shapiro). Effective carriage competition results in the record company's competing for *all* of its performances, which drives down the *average* royalty rate per performance. Shapiro SCWDT at 12. Put another way, the lower rate is offered in order to avoid having a performance share of zero on that service. Shapiro WRT at 5.

17. Steering competition, by comparison, is created by a webcaster's offering to play *more* of a particular record company's music because that music is less expensive than the music from other record companies, or threatening to play *less* of a record company's music that is

more expensive. Shapiro SCWDT at 11; 8/18/20 Tr. 2649:17-2650:9 (Shapiro). When steering competition is present, a lower rate is offered to increase the share of performances from one positive number to another, higher one (rather than from zero to a positive number, as with carriage competition). Shapiro WRT at 5; *see also* 8/9/20 Tr. 1068:25-1069:8 (Willig) (admitting that a music service could engender some degree of this type of price competition, even in the face of three must-have catalogs). Steering competition thus results in the record companies competing for *incremental* performances, and it forces down the *marginal* royalty rate for incremental performances. Shapiro SCWDT at 14. For this reason, steering competition alone cannot render the market effectively competitive *as a whole* when a record label is "must-have." *See* 8/18/20 Tr. 2636:21-2639:11 (Shapiro) ("Steering competition can lower the marginal rate, but not the average rate when you have must-have labels.").

18. The existence of competition among record companies on *non*-price dimensions, even if fierce and beneficial to buyers, does *not* imply that the royalty rates are effectively competitive. Shapiro WRT at 8 n.9. To the contrary, non-price competition often *evidences* and *reinforces* the absence of meaningful competition on *price*. When prices are set at supra-competitive levels, any competition *must* be directed along non-price dimensions in order to gain more high-margin sales. This is a well-documented issue in the context of cartels, where some employ customer or territorial allocation, preventing competition on all dimensions, in order to forestall such non-price competition. *Id.* In the present context, intense competition among record companies for playlist positioning is *not* price-based; it is a symptom of—not a cure for—complementary oligopoly in the market to license sound recordings. *See infra* ¶ 159.

II. <u>SOUNDEXCHANGE'S RATE PROPOSAL SHOULD BE REJECTED</u>

A. <u>Mr. Orszag's Benchmark Approach Is Pervaded by Methodological Errors That Conflict With *Web IV* and Produces Wildly Inflated Rates</u>

i. Mr. Orszag Has Not Fixed the Shortcomings That Caused the Judges in *Web IV* to Reject the Use of a Subscription Interactive Benchmark for Ad-Supported Statutory Services

19. Mr. Orszag takes as his benchmark for advertising-supported noninteractive webcasters the effective percentage-of-revenue royalties paid by *subscription interactive* services, and by Spotify in particular. Orszag WDT ¶ 87. In doing so, Mr. Orszag elects a benchmark that was rejected by the Judges in *Web IV* for its fundamental inapplicability to free-to-the-user statutory webcasters, and which remains plainly inappropriate today for setting royalty rates for such services. *See Web IV*, 81 Fed. Reg. at 26345; 8/12/20 Tr. 1547:7-19, 8/13/20 Tr. 1930:16-20 (Orszag) (conceding the Judges' previous rejection of his benchmark); Peterson AWRT ¶ 29. Compounding his failure to utilize an appropriate benchmark, Mr. Orszag co-opts, but fails faithfully to apply, the "ratio equivalency" model the Judges employed in *Web IV* in their benchmarking analysis for subscription (but *not* advertising-supported) webcasters. Shapiro WRT at 38-40; Leonard CWRT ¶¶ 52-54; Peterson AWRT ¶¶ 36-40.

20. Although the Judges in *Web IV* expressly repudiated the application of ratio equivalency to account for the differences in interactive functionality between the subscription and ad-supported markets (*Web IV*, 81 Fed. Reg. at 26345), Mr. Orszag purports to have addressed the issues identified by the Judges in that proceeding by modifying an input in the model: he uses the advertising revenue earned by advertising-supported noninteractive services (Pandora and iHeart custom radio) in place of the average retail revenue earned by subscription noninteractive services. 8/13/20 Tr. 1930:21-25 (Orszag); Orszag WDT ¶ 91. According to Mr. Orszag, the advertising revenue earned by advertising-supported webcasters reflects that listeners

(or advertisers, or perhaps the services themselves—it is never quite clear) have a positive willingness to pay ("WTP") comparable to his benchmark subscription interactive services. Orszag WDT ¶¶ 88-91. Yet, for the many reasons discussed below, Mr. Orszag's substitution of advertising revenue is no panacea, and his analysis fails to establish the necessary preconditions for ratio equivalence, resulting in a drastically inflated rate proposal. Shapiro WRT at 38-40 (*citing Web IV*, 81 Fed. Reg. at 26349); Peterson AWRT ¶¶ 36-40 (citing *Web IV*, 81 Fed. Reg. at 26353).

1. Mr. Orszag Does Not Actually Follow the *Web IV* Ratio Equivalence Methodology

21. Mr. Orszag's claim that he effectively cured the issues identified by the Judges in *Web IV* with the above-mentioned substitution is undermined by his failure to meaningfully adhere to their ratio equivalency model in the first place. The Judges' ratio equivalency model in *Web IV* relied on the following equation: [A]/[B] = [C]/[D], where [A] equaled the average retail subscription price for interactive services, [B] equaled the average per-performance royalty rate paid by subscription interactive services, [C] equaled the average retail subscription price for noninteractive services, and [D] equaled the per-performance royalty rate for noninteractive subscription services. *Web IV*, 81 Fed. Reg. at 26337-26338. Following this equation, the Judges derived [D] (the target market rate) by adjusting the benchmark interactive per-performance rate [B] downward by the retail price ratio of noninteractive and interactive subscription services ([C]/[A]). *Web IV*, 81 Fed. Reg. at 26337-26338.

22. Mr. Orszag's putative ratio equivalency model, however, begins with completely different inputs. His benchmark royalty amount [B] is *not* the contractual per-performance rate used in *Web IV*, but rather the total royalties paid by Spotify ([redacted]) for its subscription service over a one-year period. Orszag WDT ¶ 86; *see also* 8/13/20 Tr.

1929:22-1930:1 (Orszag) (acknowledging that in *Web IV* the Judges started from a per-performance rate (not a percentage-of-revenue metric)); 8/19/20 Tr. 2892:25-2893:7 (Shapiro) (same); 8/13/20 Tr. 1951:7-11 (Orszag) (conceding that the per-performance rates paid by his benchmark services do not factor into his ratio equivalency equation).

23. Similarly, Mr. Orszag does not use the average monthly retail subscription prices for [A] and [C] that the Judges relied on in *Web IV*; instead, he substitutes for [A] the total subscription revenue earned by Spotify over a one-year period (May 2018 to April 2019) and for [C] the gross advertising-supported revenue for Pandora's free tier and iHeart's custom radio product during the same one-year period. Orszag WDT ¶ 98 & tbl.9. As a result, when Mr. Orszag solves for [D], the result is a total royalty amount for Pandora and iHeart, *not* a per-performance royalty; Mr. Orszag only derives his proposed per-performance statutory royalty rate by dividing the total target royalties [D] by the total plays on the two free services. *Id.*

24. Mr. Orszag's substantial deviation from the Judges' *Web IV* methodology can be summarized as follows: rather than charging the target statutory services the same per-performance rate as the benchmark services (adjusted for interactivity), his model is set up to ensure that the target services pay the same *percentage-of-revenue* royalty rate as the benchmark services. 8/19/20 Tr. 2897:8-12 (Shapiro); Orszag WDT ¶ 81; 8/25/20 Tr. 3688:21-3689:6 (Peterson). This approach is irreconcilable with the *Web IV* determination, which did not even *consider* the benchmark percentage-of-revenue rate—much less attempt to apply that rate to the target advertising-supported services. In *Web IV*, the Judges *affirmatively rejected* a percentage-of-revenue royalty metric for the statutory license. *Web IV*, *81* Fed. Reg. at 26325-26. In the next two sub-sections, the Services explain that Mr. Orszag fails to justify that deviation: *first*, by failing to justify why ratio equivalency should apply as between subscription interactive and

advertising-supported noninteractive services; and, *second*, by failing to justify his switch from the benchmark per-performance rate to the benchmark percentage-of-revenue rate.

2. Mr. Orszag's New Methodology Does Not Satisfy the Criteria for Ratio Equivalency Established in *Web IV*

25. In *Web IV*, the Judges accepted Professor Rubinfeld's ratio equivalency theory with respect to subscription interactive and subscription noninteractive services, but refused to do the same as to advertising-supported noninteractive services. Shapiro WRT at 38; Leonard CWRT ¶¶ 53, 89; Orszag WDT ¶ 89; Peterson AWRT ¶¶ 26, 36. Mr. Orszag has failed to justify a different result here.

26. As an initial matter, Mr. Orszag has provided no independent economic rationale explaining why the percentage-of-revenue royalty rate applicable to subscription interactive services is an appropriate benchmark for advertising-supported noninteractive services. This is a significant omission. As Dr. Leonard testified, subscription and advertising-based services differ in many relevant ways, including (among others) having different users, revenue sources, and cost structures. *See* 8/24/20 Tr. 3560:8-3561:23 (Leonard); *see also* Peterson AWRT ¶¶ 32-35 (listing differences). Perhaps most notably, "the relationship between interactivity and revenue generation is substantially different for ad-supported than for subscription services." Leonard CWRT ¶ 54; 8/24/20 Tr. 3561:17-23 (Leonard) (describing advertising-supported services as "two-sided platform[s]" connecting users to advertisers and distinguishing them from subscription services for which there is no "other side of the market that you need to be worried about"). Because interactive and noninteractive subscription services each generate revenue through direct consumer payments, the price differential between the service tiers will reflect the value of the functionality difference between them (and thus support the concept of ratio equivalency). *Id.*

27. However, the same cannot be said of revenue earned by advertising-supported services. As Dr. Peterson testified, the revenue earned by advertising-supported services depends on advertisers' willingness to pay and the ability of the service to attract them, which may be completely unrelated to listeners' willingness to pay for music. 8/25/20 Tr. 3702:25-3703:16 (Peterson); Peterson AWRT ¶ 38. Moreover, as Dr. Leonard points out, advertisers "have no reason to prefer advertising on a service with greater interactivity," and the record of this proceeding reveals no greater willingness to pay on the part of advertisers for impressions on interactive versus noninteractive services. Leonard CWRT ¶ 54. What the record *does* reveal is that advertising revenue earned by a free service is determined primarily by the service's *own investment and skill* in building an advertising platform that will attract advertiser dollars. *See* 8/20/20 Tr. 3248:13-24 (Shapiro); Leonard CWRT ¶ 54 (noting different cost structures for advertising-supported and subscription services). As described in detail in Pandora and Sirius XM's separate submission, Pandora in particular has invested heavily in building its advertising platform, and it now enjoys significantly higher rates and greater advertising revenue as a result. *See* Pandora and Sirius XM's Proposed Findings of Fact and Conclusions of Law (Oct. 7, 2020) ("SXM-PAN PFFCL") ¶¶ 236-237.

28. The differences between how subscription interactive and ad-supported noninteractive services generate revenue have at least two relevant implications. First, while applying a benchmark percentage-of-revenue rate paid by a $9.99-per-month interactive service to a $4.99-per-month noninteractive service might be seen to naturally adjust the royalty payment on account of the interactivity difference between the service tiers (other factors being relatively equal between them), seeking to apply that same benchmark percentage rate to the revenue earned by an *advertising-supported* service does *not* have the same result. To the

contrary, it primarily would have the effect of unfairly giving the record companies a share of revenue earned by the service on account of its own investments in and contributions to its advertising platform. 8/25/20 Tr. 3690:3-3691:18 (Peterson); s*ee also Web IV*, 81 Fed. Reg. at 26325-26 (adopting a per-performance statutory rate and rejecting a percentage of revenue royalty, and noting that "there is no justification for assuming that the record companies should share in [service] monetization through a percentage-of-revenue prong in the rate structure.").

29. Second, a rate derived from applying Mr. Orszag's [redacted]% benchmark percentage-of-revenue rate to Pandora's advertising revenues in particular (as Mr. Orszag does in his model) will [redacted] [redacted]% of their revenue—a result completely at odds with the fundamental theoretical justification for Mr. Orszag's approach. *See* 8/25/20 Tr. 3690:18-3691:8 (Peterson) (identifying reasons why [redacted]); Peterson AWRT ¶¶ 45-46 (same). As Dr. Peterson demonstrated, Pandora's revenue per performance drives Mr. Orszag's results. Peterson AWRT ¶ 44; *see* 8/25/20 Tr. 3689:19-3690:2, 3691:19-3692:5 (Peterson). Applying Mr. Orszag's methodology just to Pandora, instead of Pandora and iHeart, produces [redacted]—$[redacted] cents per performance, meaning [redacted]. 8/25/20 Tr. 3691:19-3692:5 (Peterson); *see also* Peterson AWRT ¶ 44 & Fig. 4. Running Mr. Orszag's model with any other webcaster's revenues employed in place of Pandora's revenues [redacted] the result: generating an output of [redacted] cents per performance when iHeart custom radio revenues are used in the model and [redacted] cents per performance when Google Radio's revenues are used in the model. 8/25/20

Tr. 3692:6-20 (Peterson); Peterson AWRT ¶ 44 & Fig. 4. Mr. Orszag does not make any adjustment to his methodology to account for these [redacted]. 8/25/20 Tr. 3692:21-3693:18 (Peterson).

30. The disparities above were reflected in the Judges' observation in *Web IV* that *comparable demand elasticities* were a necessary pre-condition for applying interactive royalty rates to noninteractive target market services (*i.e.*, ratio equivalency). The Judges explained that requirement as follows: "When the downstream subscription market is competitive, the Hicks/Marshall relationship provides that *if the elasticities in the downstream market are the same* then, *ceteris paribus*, pursuant to the Lerner Equation, the markup of price over cost will be the same in both the upstream and downstream subscription markets, thereby supporting Dr. Rubinfeld's 'ratio equivalency' in the subscription market." *Web IV*, 81 Fed. Reg. at 26349 (emphasis added); *see also, e.g.*, 8/25/20 Tr. 3594:14-3695:5 (Peterson) (agreeing that to properly apply ratio equivalency, listeners to advertising-supported services must have the same elasticity of demand as subscribers to on-demand services). Notably, while the Judges were willing to *assume* comparable elasticities in the context of *subscription* services—given the increasing convergence between the services and a positive willingness to pay on the part of subscribers—they notably *declined* to assume the same as to subscription interactive and advertising-supported noninteractive services. *See* 8/13/20 Tr. 1933:15-23 (Orszag); Leonard CWDT ¶ 53; Peterson AWRT ¶ 29.

31. Mr. Orszag has provided no reason for the Judges to adopt a different approach in this proceeding. In fact, he does not even attempt to calculate elasticity of demand for advertising-supported noninteractive services, for advertisers on advertising-supported noninteractive services, or for the subscription interactive market—much less to demonstrate any

degree of comparability among the three. *See* 8/13/20 Tr. 1934:14-18, 22-25; 1935:9-12, 19-21 (Orszag) (conceding failure to make such calculations); 8/19/20 Tr. 2907:23-2908:3, 2925:1-5 (Shapiro) (noting that Mr. Orszag did not measure any elasticities of demand); 8/25/20 Tr. 3695:22-3696:13 (Peterson) (same). Likewise, Mr. Orszag neglected to analyze consumers' demand elasticity with regard to ad loads, despite hinging his new approach on the fact that consumer willingness to watch advertisements is how they "pay" for listening to a non-subscription service. 8/12/20 Tr. 1550:25-1551:3 (Orszag). Indeed, Mr. Orszag agreed that the demand curve is likely flatter in the advertising-supported market than in the subscription market. 8/12/20 Tr. 1549:11-18 (Orszag); *see also* 8/25/20 Tr. 3702:25-3703:16 (Peterson); Peterson AWRT ¶ 38 (explaining that advertiser WTP for *listener attention* may be completely unrelated to listeners' WTP for *music*, and thus is not a basis to assert that advertising-supported services, whose listeners are clearly price sensitive, have an elasticity of demand that is comparable to subscription services).

32. Mr. Orszag also has failed to demonstrate *comparable WTP* as between subscription interactive and advertising-supported noninteractive services—another touchstone of the *Web IV* ratio equivalency approach: "The ratio equivalency approach assumes that listeners who willingly pay for a subscription to a service have a WTP equal to the WTP of those who use ad-supported (free-to-the-listener) services. However, the record evidence is overwhelming that there is a sharp dichotomy between listeners who have a positive WTP and therefore may pay a subscription fee each month . . . and those who have a WTP of zero." *Web IV*, 81 Fed. Reg. at 26345; *see also* 8/24/20 Tr. 3441:10-3442:6 (Leonard) (explaining why the Judges in *Web IV* correctly rejected the subscription benchmark based on the sharp dichotomy in WTP); 8/25/20 Tr. 3697:3698:16 (Peterson) (same); Peterson AWRT ¶ 29 (same). That

dichotomy remains. As Dr. Leonard explained, "While it is true that users of ad-supported services 'pay' with the time spent with ads, they had the choice to pay for a subscription service and avoid ads. Thus, by revealed preference, their WTP to avoid ads (and by implication their WTP for more music in place of ads) is less than that of subscribers to paid services . . . . This distinction is the one the Judges appear to have been making [in *Web IV*], and it is correct." Leonard CWRT ¶ 54.

33. Consistent with Dr. Leonard's observation, Mr. Orszag concedes that consumers of advertising-supported and subscription services have a *different* WTP. *See* 8/12/20 Tr. 1548:7-13 (Orszag). Mr. Orszag argues, however, that the distinction between subscription on-demand and noninteractive services has eroded since *Web IV* because on-demand services have increasingly expanded the use of service-generated playlists. Orszag WDT ¶ 57. The record does not support this theory. As Dr. Peterson points out, service-generated playlists account for only 32% of listener hours on Spotify. Peterson AWRT ¶ 34. Moreover, service-generated playlists on on-demand services are not equivalent to playlists provided by noninteractive webcasters: they are not subject to the performance complement, they allow listeners to see all of the songs on the playlist, and they allow users to select any song in the playlist at any time and to freely skip and replay songs as much as desired. 8/25/20 Tr. 3698:17-3699:16, 3700:17:3701:11 (Peterson); Peterson AWRT ¶ 34; *see also* Leonard CWRT ¶¶ 41-42. In addition, Mr. Orszag's assertion misses the point that it is the distinctions between on-demand and noninteractive services that actually generate a willingness to pay $10 per month among subscribers—*i.e.*, if subscribers did not place a value of at least $10 per month on the features *only* available from subscription on-demand services, they would not subscribe. *See* 8/25/20 Tr. 3699:17-3700:11 (Peterson); Peterson AWRT ¶¶ 32-33. Thus, even if Mr. Orszag were right that some of the

distinctions between subscription on-demand and noninteractive services have eroded, it would not mean that they have the same elasticity of demand or listener willingness to pay. 8/25/20 Tr. 3702:1-13 (Peterson); Peterson AWRT ¶ 37; *see also* 8/25/20 Tr. 3697:3698:16 (Peterson) (noting that the dichotomy between the willingness to pay of advertising-supported and subscription users has not changed since *Web IV*); Peterson AWRT ¶ 29 (same); *see also* Leonard CWRT ¶ 42 (noting that "[m]any interactive users do not use [lean-back] functionality (and thus do not value it significantly)" and "even among the subset of interactive users that use the functionality, its existence does not necessarily create 'convergence'").

34. Related to their discussion of WTP, the *Web IV* Judges also observed that "Dr. Rubinfeld's 'ratio equivalency' assumes a 1:1 opportunity cost for record companies, whereby, on the margin, a dollar of revenue spent on a subscription to a noninteractive service is a lost opportunity for royalties from a dollar spent on a subscription to an interactive service." *Web IV*, 81 Fed. Reg. at 26344-45. Mr. Orszag conceded at trial that he has *not* provided evidence that a dollar spent by an advertiser on an ad-supported noninteractive service would otherwise be spent on a subscription to an interactive service, or that if users of an ad-supported noninteractive service were not generating a dollar of advertising revenue through their listening they would otherwise be paying a dollar in subscription revenue to an interactive service. 8/13/20 Tr. 1948:2-16 (Orszag).

35. Mr. Orszag's written direct testimony identified a handful of Pandora research presentations he claimed revealed [redacted] *See* Orszag WDT ¶¶ 92-93. A more careful examination of these documents, however, reveals the opposite. For example, Mr. Orszag cited page 5 of TX 5062, which merely says that [redacted]

[redacted] *See* Orszag WDT ¶ 92 & n.127. That survey, however, says nothing about [redacted] *See* 8/13/20 Tr. 1938:21-1939:7, 1939:15-19 (Orszag). The same is true of TX 5056 (page 26 of which is cited by Mr. Orszag) and TX 5061 (page 2 of which is cited by Mr. Orszag) (*see* Orszag WDT ¶ 93 & nn.128-9): [redacted] 8/13/20 Tr. 1940:25-1941:25, 1943:7-9 (Orszag).

36. Indeed, the distinct on-demand attribute of subscription interactive services is still the major driver of consumer demand for those willing to pay for such services. 8/12/20 Tr. 1505:25-1506:5 (Orszag); Leonard CWRT ¶¶ 44-46; TX 2041 at 21 ("[[redacted]]"); TX 2040 (noting the top reasons for subscribing to a subscription services include ["[redacted]"[redacted]; TX 2079 at 22 (finding [[redacted]"]); *see also* TXs 2045 at 4; 2046 at 12; 2122 at 8 (Amazon, Apple, and Spotify user behavior studies finding [[redacted]]).

37. Moreover, as Dr. Peterson points out, Mr. Orszag's claim that ad-supported and subscription services are to some degree substitutable is economically irrelevant because it does not imply that they have the same elasticity of demand, which they must to employ ratio equivalency. 8/25/20 Tr. 3702:14-24 (Peterson); Peterson AWRT ¶ 39. To the contrary, large

numbers of listeners choose free services over subscription ones, demonstrating greater price sensitivity. Peterson AWRT ¶ 39.

38. The most directly relevant evidence on this point in the record—the surveys conducted to determine diversion from ad-supported services to other forms of listening—show persistently *low* diversion to paid interactive services. For example, the Zauberman survey cited by Mr. Orszag shows that only 14% of users of noninteractive ad-supported services stated that they would start listening to interactive subscription services if their ad-supported services were not available.[5] *See* Leonard CWRT ¶ 57 & Tbl. 2; 8/13/20 Tr. 1945:23-1946:12 (Orszag) (agreeing that 86% of respondents did not say they would pay for a subscription on-demand service absent their noninteractive service). Similarly, Professor Hanssens' survey found that, in the event a noninteractive service like Pandora's was degraded, only 21.3% of respondents would divert to a paid interactive service that they did not already use. Hanssens CWDT ¶ 49 & tbl. 3. There is even less crossover with simulcasts: Professor Hauser's survey found that if listeners to internet simulcasts no longer had access to those services only 7.4% of respondents would divert to a paid on-demand service they already used, and 1.4% would purchase a new on-demand subscription. Hauser WDT App. R at 176. These numbers generally accord with the diversion measures credited by the Judges in *Web IV*, where 91% of his respondents were "not at all likely" or "not very likely" to subscribe to an interactive service for $9.99 per month. *Web IV*, 81 Fed. Reg.at 26327-28.

39. In summary, Mr. Orszag has provided nothing to suggest the Judges' admonition from *Web IV* is not just as true today as it was then: "ad-supported (free-to-the-listener) internet webcasting appeals to a different segment of the market, compared to subscription internet

[5] As discussed in Section II(D)(iv), the Zauberman survey did not distinguish between subscribing to subscription services or simply switching to listen to existing subscriptions, among other flaws.

webcasting, and therefore the two products differentiated by this attribute ('ads and free' vs. 'no ads and subscription fee') cannot be compared to perform a 1:1 measure of opportunity cost as is the case of Dr. Rubinfeld's 'ratio equivalency' model." *Web IV*, 81 Fed. Reg. at 26346.

40. Mr. Orszag tries to paper over these failures through a misleading two-step syllogism that attempts to insert Spotify's *free* service into the comparison. First, he claims that Spotify pays roughly the same percentage of revenue for its free service as for its subscription service. 8/12/20 Tr. 1554:6-10. Second, he claims that Spotify's free service has roughly the same revenue per play as Pandora's free service. 8/13/20 Tr. 1936:9-19. Applying something akin to a transitive property of benchmarking, Mr. Orszag then claims that these two separate comparisons somehow satisfy the conditions for ratio equivalence as between Spotify's *subscription interactive* rates and *ad-supported noninteractive* rates. *Id.* This is pure sophistry.

41. To start, Mr. Orszag does not show similar demand elasticity as between ad-supported noninteractive and subscription interactive services—a key requirement of ratio equivalence. Spotify free is an *interactive* service, so the equivalence of its royalty share with its interactive tier is simply not informative as to demand elasticity on *non*interactive services. 8/12/20 Tr. 1554:11-17 (Orszag). Mr. Orszag attempts to *infer* comparable elasticities of demand from the Lerner index, noting that Spotify subscription and Spotify free both pay roughly [redacted]% of revenue as a royalty (and thus have comparable margins). *Id.* at 1553:25-1554:10. But Spotify's rate structure is a function of [redacted] more so than any proof of economic concept. And in all events, Mr. Orszag's inference simply does not extend to free *noninteractive* services, which have not agreed to pay a [redacted]% royalty.

(Indeed, it is the noninteractive royalty that Mr. Orszag's benchmarking exercise is trying to solve for—*i.e.*, it is the *output* of his analysis, not an input that can be assumed.).

42. Similarities in revenue generation between Spotify's and Pandora's *free* tiers do not and cannot bridge that conceptual gap. Mr. Orszag fails to show similar revenue per-play as between Spotify's *subscription* service (his actual benchmark) and Pandora's free tier, let alone for any other noninteractive services (which, as noted above, tend to earn much less in advertising revenue than Pandora). 8/13/20 Tr. 1936:20-1937:14 (Orszag). Moreover, comparable revenue per play across the services does not speak to comparable *demand elasticity*. *See* 8/19/20 Tr. 2910:11-17 (Shapiro) (explaining that for two subscription services one can relate the margins to the elasticities using the Lerner Index, but the same does not apply to subscription and ad-supported services);[6] *see also supra* ¶ 27; *infra* ¶ 277-279; SXM-PAN PFFCL ¶¶ 236-237 (describing how revenue generation on free services primarily reflects their respective investments in advertising infrastructure).

43. Indeed, the consistency of Spotify's percentage-of-revenue royalty across its various offerings *disproves* (rather than supports) Mr. Orszag's ratio equivalence assumption in this setting. As Dr. Peterson explained, because student and family cohorts are more elastic than individual cohorts (as evidenced by the price discrimination Spotify implements), services should pay a lower share of their revenues as royalties for student and family plans. 8/25/20 Tr. 3704:9-14 (Peterson); Peterson AWRT ¶¶ 49, 54-55. However, [redacted]

[6] In a lengthy colloquy with the Judges, Mr. Orzag conceded that the difference between the Spotify free and Spotify paid subscription tiers was not simply that users on the former pay with their time, while users on the latter pay with their money—or that the dollars paid by advertisers for the former are the equivalent of dollars spent by subscribers on the latter; rather, the functionality that subscribers are paying for is significantly different than the more limited (and intentionally degraded) ad-supported service. 8/11/20 Tr. 1241:8-1243:14 (Orszag) (conceding the revenue differences between the tiers reflect both functionality differences and the presence or lack of ads); *see also* 9/3/20 Tr. 5695:19-22, 5717:15-22 (Harrison) (discussing restrictions on functionality available on Spotify's free tier). These dissimilarities further undercut the attempt to substitute free ad revenue for subscription revenue in the ratio equivalency model.

[redacted]

Peterson AWRT ¶¶ 50, 54-55; *see also id.* ¶ 52 fig.5; 8/25/20 Tr. 3705:1-3706:22 (Peterson) (explaining the royalty payment information shown in figure five of his written testimony). This is flatly "inconsistent with the hypothesis of ratio equivalency derived from the Lerner Equation." *Id.* ¶ 54. The [redacted]% fee Spotify pays across its service offerings is neither a function of comparable demand elasticities across those offerings nor a basis for applying that rate to *other* services, especially of the ad-supported, noninteractive variety. 8/25/20 Tr. 3706:23-3707:11 (Peterson); Peterson AWRT ¶¶ 50, 55 ("The fundamental principle underlying Mr. Orzag's rate methodology is false in the benchmark market."); *see also* 8/25/20 Tr. 3695:9-14 (Peterson) ("If in the benchmark market royalty rates do not fluctuate with the elasticity of demand, then there is no basis to take that royalty ratio, by which I mean the ratio of royalty to revenue, from the benchmark market to the target market for the calculation of rates."). Instead, the rate consistency reflects the complementary oligopoly power of the record companies, who can impose the same rate "without regard for changes in the elasticity of demand that even a monopolist would take into account when setting rates." Peterson AWRT ¶ 56.[7]

3. Mr. Orszag fails to justify his abandonment of the per-play benchmark embraced by the Judges in *Web IV*

44. Finally, in addition to his failure to establish the necessary economic prerequisites for ratio equivalence between subscription interactive and ad-supported noninteractive services,

[7] The record reveals that the percentage-of-revenue rates for subscription on demand services were set not based on the proximity of those services to other forms of streaming, but rather to sales of *CDs and downloads*, with Mr. Harrison of UMG agreeing that "UMG believes it should receive the same percentage of revenue from a subscription on-demand service that it does from the sale of a sound recording because subscription services are replacing physical and digital sales as the mainstream normal retail channel through which UMG sells its music"). 9/3/20 Tr. 5691:24-5692:13 (Harrison).

Mr. Orszag provides no valid justification for abandoning the per-play benchmark utilized in *Web IV*. Mr. Orszag's stated rationale for the switch is that while the per-play rate was the operative metric under which on-demand services paid in *Web IV*, they now typically pay under the percentage-of-revenue prong of their agreements. *See* 8/11/20 Tr. 1233:24-1234:12 (Orszag); 8/13/20 Tr. 1930:8-15 (Orszag). Not only did he fail to support that contention with any evidence, but [redacted] (entered into well before *Web IV*). *See* 9/2/20 Tr. 5152:2-5154:6 [redacted].

45. Mr. Orszag and SoundExchange's counsel also sought refuge for his about-face in the later *SDARS III* decision. *See SDARS III*, 83 Fed. Reg. at 65243 n.137 (stating generally that ratio equivalence involves equating revenues to royalties in the interactive and statutory markets); 8/20/20 Tr. 3018:9-14 (Shapiro) (questioning Professor Shapiro about n.137). SoundExchange is left to argue that a ruling flatly *rejecting* Mr. Orszag's ratio equivalence approach somehow actually supports it. To be clear, there is no indication *whatsoever* that the *SDARS III* determination (much less a single sentence in a footnote) was intended to rewrite or expand *Web IV*: as Professor Shapiro pointed out, the "royalties" utilized in *Web IV* were *per-play* royalties (not percentage-of-revenue rates) and the "revenues" used to equate them were monthly per-subscriber revenues. *See* 8/20/20 Tr. 3217:4-15 (Shapiro). More to the point, *SDARS III* plainly rejected Mr. Orszag's attempt to extend ratio equivalence to Sirius XM for reasons that are equally applicable to webcasters here.

46. In *SDARS III*, Mr. Orszag argued that under the same principle of ratio equivalency that he advocates here, the percentage of revenue paid by interactive services, then calculated at [redacted]%, should be applied to Sirius XM (albeit adjusted to [redacted]% to account for Sirius

XM's 50/50 split of music and non-music content). *SDARS III*, 83 Fed. Reg. 65210, 65244. The Judges rejected that approach and ultimately set the rate at 15.5%, far from "equivalent" to the ratio found in the benchmark interactive market. *Id.* at 65210, 65247-48. In the course of doing so the Judges noted that "Mr. Orszag did not provide either qualitative or quantitative evidence of a sufficiently high cross-elasticity" between the benchmark services and Sirius XM, and observed that the surveys in the case indicated "no such high substitutability between subscribership to interactive services and to Sirius XM" and thus "negate[d] any complete or overwhelming ratio equivalency Mr. Orszag has posited"—exactly as is the case again in the proceeding with respect to noninteractive webcasting. *Id.* at 65247 (observing further that the survey evidence "revealed a substitutability of interactive services for Sirius XM at significantly less than 1:1.").

47. Regardless, for reasons elucidated by Professor Shapiro and Dr. Peterson, the per-performance benchmark remains the more appropriate starting point for the benchmarking exercise for advertising-supported webcasters. At the most basic level, the royalty being set for statutory services is a per-performance royalty, not a percentage-of-revenue one—so it makes sense to start from the benchmark per-performance rate and then make simple adjustments for interactivity, skips, and effective competition. Shapiro WRT at 24-25; Peterson AWDT ¶¶ 13, 15. Starting with the percentage-of-revenue paid by the benchmark services and then converting *back* to a per-play at the end of the process is, to use Professor Shapiro's words, "roundabout and unjustified" in comparison to just starting with the per-play benchmark rate (as in *Web IV*). 8/19/20 Tr. 2893:8-12 (Shapiro). As Professor Shapiro also testified, starting from a benchmark per-performance rate (as he and the other Services' economists do with per-performance rates paid by Spotify for its free service) best captures the value of music rights offered by ad-

supported services: "[T]he better metric to thinking about value being created, it would be a per-play metric. And that's particularly clear maybe on the advertising side where there's another party in the picture, it's not just the listener who's enjoying the music, but there's an advertiser who is . . . paying on that basis. So that's how I think about value. It's really per-play." 8/20/20 Tr. 3246:20-3248:5 (Shapiro).

4. The Spotify Free Tier Rates Calculated by Dr. Peterson and Professor Shapiro Do Not Salvage Mr. Orszag's Benchmark Model

48. In his written rebuttal testimony, Mr. Orszag suggested that his benchmarking approach is buttressed by Professor Shapiro and Dr. Peterson's derivation of per-play rates for the Spotify free tier, arguing that simply substituting the Spotify free tier percentage-of-revenue rates (as opposed to the subscription tier rates he relies on) would not materially change his results, all the while insisting that his subscription benchmark remained superior nonetheless. Orszag CWRT ¶ 71 & n.155-156; *Id.* ¶¶ 82-84 & tbl.9; 8/10/20 Tr. 1161:3-11 (Orszag). However, during the economic rebuttal round of the hearing, he changed his tune, claiming that he had suddenly become "more comfortable" using the Spotify free rates as an actual benchmark because Professor Shapiro's proposed [redacted]% upward adjustment [redacted] 8/25/20 Tr. 3816:2-16 (Orszag). More specifically, he argued that if the [redacted] upward adjustment were made to the rates calculated by Professor Shapiro and Dr. Peterson, they would still be in the same range that he calculated in his own ad-supported benchmark model, thus supporting his approach. *Id.* 3817:20-23 (explaining that Professor Shapiro's and Dr. Peterson's rates would rise from $[redacted] to roughly $[redacted] after the [redacted] adjustment, each in line with his calculation of $[redacted]).

49. Mr. Orszag's testimony is highly misleading and demonstrably false. To see why, it is useful to recall that Mr. Orszag's proposed $[redacted] ad-supported rate (rounded up to $[redacted] in his tables) is the result of applying [redacted]% to combined Pandora and iHeart (custom radio) revenues and then dividing by the number of plays—*i.e.*, his (discredited) application of ratio equivalence to ad-supported services. Orszag WDT ¶ 98 & tbl.9; Orszag WRT ¶ 82. Professor Shapiro and Dr. Peterson, by comparison, calculated the effective per-play rate paid by Spotify for its free tier ($[redacted]) by simply dividing the total royalties paid by the total performance count; the result of which they then proposed adjusting for interactivity, skips, and effective competition.[8] *Neither the revenue generated on Spotify's free tier nor the percentage of that revenue it paid in royalties played any role in their calculations*. *See* Shapiro SCWDT at 36 ("I determined the effective rate…[for Spotify Free and SoundCloud] by dividing total royalty payments by the total number of performances," weighing the average effective rate across by the relative number of performances"); 8/25/20 Tr. 3634:9-18 (Peterson) (same).

50. In other words, $[redacted] is the effective per-play rate paid *by Spotify* in the interactive *benchmark* market, which is then subject to further adjustments for interactivity, skips, and effective competition. 8/26/20 Tr. 3933:7-3934:6 (Shapiro). SXM-PAN PFFCL ¶¶ 222, 228-229. $[redacted], by comparison, represents Mr. Orszag's proposal for the *target market* services, calculated by applying the [redacted]% subscription benchmark royalty to *target market* revenues—to which he proposes no further adjustments.

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[8] Dr. Leonard calculated an effective per-play royalty of [[redacted]] for Spotify's free tier over the January 2018 to March 2019 period using Spotify royalty statements and agreements, and calculated an effective rate of [[redacted]] for January 2019 to April 2019 using Mr. Orszag's backup data. Leonard CWDT ¶¶ 76-78; Leonard CWRT ¶ 51 & n.95. These figures did not include any further adjustments by Dr. Leonard, *e.g.*, for skips. *See* Leonard CWDT ¶ 78 n.105.

51. Viewed in this context, it is clear that Table 9 and paragraph 84 of Mr. Orszag's written rebuttal testimony (and his related live testimony) are deceptive. To be sure, the third column of the Table does reflect the Orszag methodology: as just noted, he multiplies the effective percent-of-revenue paid by Spotify for its subscription tier (Row 1) by Pandora's and iHeart's (custom radio) free tier revenues, and then divides by those services' play counts (Row 2) to derive his proposed rate (Row 3). However, Mr. Orszag constructs the table to suggest that Professor Shapiro (Column 1) and Dr. Peterson (Column 2) followed the same methodology, albeit applying Spotify's free-tier royalty percentage to free-tier revenue to arrive at their "Benchmark Per-Play Rate" in Row 3. Mr. Orszag's explanation in Paragraph 84 of his rebuttal testimony says as much, claiming that "[t]he second part of the calculation involves multiplying the percentage-of-revenue rate by the revenue per play in order to convert the former into a per-play benchmark rate. Here, again, Professor Shapiro and Dr. Peterson have used the revenue per play for Spotify's ad-supported tier, under the implicit assumption that the revenue per play for the statutory noninteractive ad-supported services is the same as that for Spotify interactive ad-supported tier." Orszag WRT ¶ 84.

52. But that is not at all what either Professor Shapiro or Dr. Peterson did—not even close. Professor Shapiro and Dr. Peterson did *not* apply Spotify's royalty percentage to its Gross Revenues/Plays: as noted above, neither the gross revenue earned by Spotify on its free tier, the percentage of revenue paid by Spotify on its free tier, nor the revenue per play earned by Spotify on its free tier played *any role* in their calculations—much less did Professor Shapiro or Dr. Peterson attempt to graft that percent-of-revenue royalty onto the statutory services. The Shapiro and Peterson "Benchmark Per-play Rates" displayed in Row 3 of Table 9 were instead calculated by dividing Spotify's total royalties paid by the number of its performances streamed, ***not*** by

multiplying the numbers found in Rows 1 and 2 (numbers that do not appear anywhere in Drs. Shapiro and Peterson's written direct testimonies). *See* Shapiro SCWDT at 36 & tbl. 9; 8/25/20 Tr. 3634:9-18 (Peterson). Rather, Mr. Orszag reverse engineered Professor Shapiro's and Dr. Peterson's analyses to derive the values in Rows 1 and 2, and then misleadingly included them in Table 9, implying that they were the basis for their calculations, which they most certainly were not.

53. As a result, Row 3 of the Table—which purports to present each economist's "Benchmark Per-Play Rate"—is decidedly *not* the apples-to-apples comparison Mr. Orszag attempts to suggest. As the preceding discussion makes clear, the $[redacted] rate Mr. Orszag calculates is *not* the "benchmark per-play rate" for Spotify in the same way that it is for Shapiro and Peterson, *i.e.*, the rate paid by the benchmark service (Spotify) on its ad-supported tier; rather, it is the rate Mr. Orszag proposes to be paid by the *target market services* based on an application of his percentage-of-revenue benchmark rate to *their* revenues.

54. At the end of the day, then, Mr. Orszag has shown little more than the fact that Spotify [redacted]—hardly a controverted fact given the structure of its license agreements—and that the [redacted] (also undisputed). But the rate similarity is a pure function of structure in Spotify's license agreements, which [redacted] *See* 8/11/20 Tr. 1206:9-1208:7 (Orszag). For all the reasons already discussed, *see supra* Section II(A)(i)(1-3), neither that rate structure nor the coincidence in free-tier revenues remotely justifies ratio equivalence, *i.e.*, applying the Spotify percentage-of-revenue rate to Pandora's (or any other noninteractive service's) advertising revenues and calling it a day. Mr. Orszag has still failed to justify his application of ratio

equivalence to ad-supported services by demonstrating the above-described preconditions: similar demand elasticities, 1:1 opportunity cost, etc. *See* 8/19/20 Tr. 2907:14-2908:3, 2924:14-2925:5 (Shapiro) ("[redacted]. [redacted]."); 8/25/20 Tr. 3695:22-3696:13, 3697:21-23 (Peterson) ("[redacted]"); 8/11/20 Tr. 1934:14-1937:14 (Orszag). Substituting the benchmark percentage rate from the Spotify ad-supported service is a circular shortcut that does not and cannot replace that required showing. *See* 8/13/20 Tr. 1936:4-16 (Orszag).

55. Worse, because the [redacted], Mr. Orszag's ratio equivalence approach effectively washes out any interactivity adjustment. Far from ratifying his approach, that signifies that there is something *wrong* with it. And what is wrong is that relative advertising revenue per play, as shown above, is simply not an appropriate or sufficient measure of the value of interactivity as between subscription interactive services and ad-supported noninteractive services. *See* 8/20/20 Tr. 3238:1-5 (Shapiro). [redacted] *See* 9/3/20 Tr. 5717:7-14 (Harrison) [redacted]

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[9] Universal Music Group ("Universal" or "UMG"), Sony Music Entertainment ("Sony" or "SME"), and Warner Music Group ("Warner" or "WMG"), collectively, are known in the industry and referred to herein as the "major labels" or the "Majors."

[redacted]; *see also* Leonard CWRT ¶ 43. If anything is to be drawn from the Spotify free tier rates, it is that statutory services should pay *less*, not the same or (as SoundExchange proposes) even *more*. *See, e.g.*, 3748:18-3749:13 (Peterson) (observing that Mr. Orszag's and Professor Willig's rates are above the raw, unadjusted Spotify free tier rates, which does not make any economic sense in an effectively competitive market).[10]

56. The far superior approach to using the Spotify free tier percentage-of-revenue rates is simply to start from the per-play rates—whether the effective rates (with a [redacted]) as Professor Shapiro proposes, or the contractual per-play rates for [redacted]—and then make adjustments for interactivity, skips, and effective competition. *See* SXM-PAN PFFCL § IV(C).

ii. Mr. Orszag Fails to Make an Appropriate Adjustment for Effective Competition

57. In *Web IV*, "the Judges conclude[d] that they are required by law to set a rate that reflects a market that is effectively competitive." *Web IV*, 81 Fed. Reg. at 26332. All economists in this proceeding agree that the rates set should reflect a hypothetical effectively competitive marketplace. *See, e.g.*, Willig CWDT ¶ 6; 8/12/20 Tr. 1589:12-15 (Orszag); Shapiro WRT at 4 (adding that if monopoly or complementary oligopoly rates were acceptable, "there would be no need to establish and set rates for a statutory license"); Leonard CWDT ¶ 22; Peterson AWDT ¶ 6.

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[10] [redacted]. *See* SXM-PAN PFFCL ¶ 233.

58. In *Web IV*, the Judges found the rates for on-demand licenses to be the result of the major labels' complementary oligopoly power in that market and thus not reflective of effective competition. *Web IV*, 81 Fed. Reg. at 26344; 8/12/20 Tr. 1591:24-1592:5 (Orszag). And the Judges made a 12% downward adjustment to the rates as a result. *Web IV*, 81 Fed. Reg. at 26404-05; 8/12/20 Tr. 1592:18-1593:3 (Orszag).

59. Similarly, in *Phonorecords III*, the Judges concluded that "[a]s must-have suppliers in an unregulated market, record companies are in a position to walk away from negotiations with the Services and, effectively, put them out of business." *Phono III*, 84 Fed. Reg. at 1953; *see also id.* at 1934 n. 75 ("Record companies could, if they so chose, put the Services out of business entirely."); *accord Johnson*, 969 F.3d at 382 (observing that sound recording rightsholders have "unchecked market power"). At the hearing, Mr. Orszag clarified that he is "not challenging" that as of April 2017, the labels could put interactive services out of business entirely. 8/12/20 Tr. 1597:17-1600:22 (Orszag).

60. Mr. Orszag also does not contest that in *SDARS III*, the Judges rejected his contentions that the market for interactive licenses had become effectively competitive, and that there was therefore no need for a competition adjustment. *SDARS III*, 83 Fed. Reg. at 65231 ("[T]he Judges find there is no *bona fide* dispute but that these rates would partially reflect the complementary oligopoly effect of Majors."); *id.* at 65245 (listing the bases for Mr. Orszag's argument); 8/12/20 Tr. 1605:9-1606:4, 1619:5-1621:17 (Orszag) (acknowledging that the Judges rejected his argument).

61. There is similarly no dispute that the major record labels remain "must-have" for interactive services. *See, e.g.*, 8/12/20 Tr. 1598:15-16, 1600:6-11 (Orszag); 8/25/20 Tr. 3653:13-23 (Peterson); Peterson AWRT ¶¶ 27, 35; Shapiro WRT at 10; Leonard CWRT ¶ 3.

62. However, Mr. Orszag nevertheless claims that no adjustment is needed to 2017 benchmark agreements because the market has purportedly become effectively competitive, giving three basic reasons: (1) the alleged presence of [redacted] price competition between the major labels; (2) that [redacted] have purportedly become "must have" for the major labels, counterbalancing the labels' complementary oligopoly power; and (3) that an alleged price decline in the market reflects (or at least approximates) effective competition. *See, e.g.*, Peterson AWRT ¶ 5 (summarizing Orszag's arguments). In fact, all of these arguments are without merit.

1. There is No [redacted] Price Competition in the Interactive Services Market As Claimed by Mr. Orszag and the Label Witnesses

63. SoundExchange's position that the labels lack complementary oligopoly power in the market for interactive streaming services is founded in part on the assertion that those services engage in "steering" vis-à-vis the labels. That argument is wrong at several levels.

64. Most fundamentally, SoundExchange's claim is based on an understanding of "steering" that is unmoored from economics or the Judges' prior determinations. The *actually* relevant form of "steering" for purposes of the proceeding here is steering that reflects and enables *price competition* among the labels. *See Web IV*, 81 Fed. Reg. at 26343 ("Steering is synonymous with price competition in this market[.]"); *see also Web IV Appellate Decision*, 904 F.3d at 52 (affirming the Board's decision that "the likely effect of steering in the music industry would be to promote price competition"); Shapiro SCWDT at 11.

65. The kind of "steering" that SoundExchange relies on is different. It is instead based on the observation that Spotify exercises some amount of editorial choice in selecting what songs to feature on its service and can therefore "steer" plays of those particular songs. Orszag

WDT ¶¶ 141-149; 8/18/20 Tr. 2650:10-14, 2651:5-9 (Shapiro). The fact that Spotify engages in such curation does not, in and of itself, reflect the forces of price competition between the Majors who serve as Orszag's benchmark or prove that Spotify has induced price competition among them. 8/18/20 Tr. 2650:10-20, 2651:5-9 (Shapiro).

66. To the contrary, the record evidence conclusively demonstrates that record labels *do not* compete with each other over price. Among other things, the actual agreements among record labels and interactive services reflect that [redacted]. Indeed, no SoundExchange witness provided *any evidence* of any interactive service intentionally steering to lesser-priced content. And some openly disavowed any effort by the labels to encourage steering through lower prices. None of SoundExchange's speculative assertions to the contrary has merit.

(i) There is No Evidence of Steering by Interactive Services

67. [redacted]. To start, SoundExchange cannot point to any [redacted]. In *Web IV*, the Board relied on an agreement between Merlin and Pandora for Pandora's noninteractive service that expressly provided that "the 'headline' per-play rates can be reduced by steering" as set out in the agreement. *Web IV*, 81 Fed. Reg. at 26356. Similarly, the Board discussed an "iHeart/Warner Agreement [that] incorporates the same economic steering logic as the Pandora/Merlin Agreement." *Id.* at 26375. By contrast, [redacted] agreements with record labels offered into evidence in this proceeding contain no such provision or purpose. In fact, as discussed further in this section, these agreements [redacted]

68. *No Evidence of Actual Steering.* SoundExchange presented no evidence that [redacted] ever *actually* engaged in steering among labels based on price. It offered no evidence that [redacted] that serve as Mr. Orszag's benchmark, nor after the rate in the [redacted] agreement changed to [redacted] while [redacted] agreements with other labels were still at [redacted].

69. Mr. Orszag conceded this point at the hearing. He testified in a colloquy with Judge Strickler that there is no "[redacted]." 8/12/20 Tr. 1536:9-22 (Orszag). As he put it more bluntly, "[redacted]." *Id.* at 1711:18-20 (Orszag); *see also* Shapiro WRT at 16 (summarizing lack of evidence in Orszag WDT and noting "when Mr. Orszag discusses how the major record companies have responded to the growing role of service-generated playlists, he does *not* claim they have reduced their royalty rates to encourage increased plays of their material"). And neither [redacted] reported lowering its royalty rates to undercut competition and gain performances of their recordings. Peterson AWRT ¶ 74.

70. Record-label executives likewise admitted that they were not aware of any specific evidence to support [redacted] Sony's Piibe testified that [redacted]. 9/2/20 Tr. 5371:21-5372:1 (Piibe). UMG's Harrison [redacted], though not without noting "[redacted]." 9/3/20 Tr. 5698:5-12 (Harrison).

And Warner's Adadevoh [redacted]" and "[redacted]" 9/3/20 Tr. 5531:22-5532:4 (Adadevoh). She also testified that she could not "[redacted]" 9/3/20 Tr. 5480:24-5481:12 (Adadevoh); *see also id.* at 5481:25 (Adadevoh) ([redacted]); TX 4014 at 3 ("[redacted]").

71. No record label witness was aware [redacted] under its agreements with other labels. [redacted] with the three major record [redacted]. But in 2017, [redacted] entered into a new deal with [redacted]. Yet even as it continued to negotiate with [redacted].[11] Sony's Piibe noted that, after learning that [redacted] had agreed to a [redacted] headline rate with [redacted]." 9/2/20 5370:25-5371:7 (Piibe). Warner's Adadevoh inquired specifically about [redacted] in April 2017. But a contemporaneous [redacted] concluded it "[redacted]" and "[redacted]

[11] As discussed in more detail below, [redacted] *See infra* ¶¶ 151-156.

[redacted].” TX 4014 at 1, 3. Ms. Adadevoh admitted that “[redacted]” 9/3/20 Tr. 5537:3-12, 5539:6-10 (Adadevoh) (quoting TX 4014); *see also* Shapiro WRT at 17-18 ([redacted]).

72. *Non-Music Playlists.* With [redacted], SoundExchange next falls back on the suggestion that [redacted]. *See, e.g.*, 8/12/20 Tr. 1719:18-22 (Orszag). That argument confirms, first, [redacted] Peterson AWRT ¶72 ([redacted]). What is more, SoundExchange's own witnesses agreed [redacted]. One internal [redacted]. TX 4017 at 4. Warner's Adadevoh similarly agreed that [redacted].” 09/03/20 Tr. 5544:23-5545:6 (Adadevoh) (discussing TX 4014 at 3); *see also* Shapiro WRT at 18 ([redacted]); 8/25/20 Tr. 3720:7-17 (Peterson); Peterson WRT

¶ 71 ([redacted]). Finally, as discussed below, the Major's reaction to [redacted], [redacted] 8/13/20 Tr. 1887:2-16 (Orszag).

(ii) No Evidence Supports SoundExchange's "Ability to Steer" Arguments

73. With no evidence of actual steering, SoundExchange switches gears to argue that record label agreements with Spotify reflect effective competition because Spotify can alter the mix of songs used on its service through an increased use of service-curated playlists. This argument also fails.

74. From an economic perspective, the mere ability to decide what songs to play—particularly when defined as editorial curation and not as a price-based decision—is not the sort of steering that is meaningful here. As Professor Shapiro explains, "steering" "refer[s] to a service playing more of a particular record company's music *because the music is less expensive than the music of other record companies*." Shapiro WRT at 15; *see also* 8/18/20 Tr. 2649:17-25 (Shapiro) (to similar effect). And steering-based price competition (what really *is* meaningful here) is when a record company agrees to a lower rate in order to gain or protect its play share or spin share on a service—not just the ability of a service to influence what consumers hear. *Id.* at 2650:5-2651:11; Shapiro WRT at 15-16.

75. But "the ability of interactive services to generally influence music selection has little or no relevance for the benchmarking exercise if that ability was not used to obtain lower royalty rates." Shapiro WRT at 16. That is because when a service has the ability to influence music selections, "each major record company would have a clear incentive to encourage Spotify to play more of its music to increase its *pro rata* share of the royalty pool." *Id.* But

SoundExchange "does *not* provide evidence that the ability of services to influence music selection has caused the major record companies to compete against each other on the basis of price. Indeed, they have not done so." *Id.*

76. In fact, label witnesses closest to the playlist process admitted that [redacted]. *See, e.g.*, 9/2 Tr. 5435:8-12 (J. Fowler) ("[redacted]").

(iii) No Evidence Supports SoundExchange's "[redacted]" Argument.

77. At the hearing, SoundExchange argued for the first time that [redacted] in its negotiations, and that major labels [redacted]. 9/1/20 Tr. 5088:9-5089:3 (Piibe); 9/3/20 Tr. 5498:17-5499:8 (Adadevoh).

78. Yet despite making steering-based price competition a central part of their case at trial, SoundExchange's written direct statements contains no evidence [redacted]. Its written direct case contains not one citation to a negotiation document between [redacted] and a Major record company, even though SoundExchange included testimony from numerous label witnesses in its written case and presumably had access to those files.

79. For instance, Mr. Orszag admitted at the hearing that his written direct testimony did not describe any label negotiation documents. 8/12/20 Tr. 1651:20-24; 8/13/20 Tr. 1868:7-11. He further admitted that he did not rely on particular negotiation documents in preparing his written direct testimony—including documents that he tried newly to introduce to buttress his

positions after the fact. 8/12/20 Tr. 1743:14-1745:3 ([redacted]); 8/13/20 Tr. 2062:9-2063:12, 2064:21-2065:3 ([redacted]); 8/13/20 Tr. 1877:18-22 ([redacted]). Even in rebuttal, Orszag cited just *two* documents (both from UMG) out of a negotiation file comprising thousands of documents where [redacted]. Orszag WRT ¶ 21 n.33; 8/13/20 Tr. 1869:14-24 (Orszag).

80. Likewise, UMG's Harrison did not cite any negotiation documents in his written testimony, and during the hearing he admitted that [redacted]. 9/3/20 Tr. 5693:16-22 ([redacted]); *id.* at 5695:23-5696:1 ([redacted]).

81. The same is true for Warner's Adadevoh. Her written direct statement did not cite any negotiation documents. Moreover, she admitted that her role in the [redacted] was [redacted]

[12] Exhibits cited herein with an asterisk were either admitted or offered into evidence at the hearing subject to qualification and/or the Judges' resolution of pending objections. All such exhibits are identified in Attachment A hereto.

[redacted]. 9/3/20 Tr. 5517:7-5519:24 ([redacted]).

82. Having failed to identify documentary support for its arguments in its written testimony, SoundExchange attempted instead to shore up that evidentiary failing after the fact: specifically, after the submission of written rebuttal testimony and even after the submission of exhibit lists, SoundExchange combed the labels' negotiation files and identified at trial new negotiation documents, *never cited or relied upon by any witness in its written case*, that its witnesses attempted to cite and rely on to support their case. Even if the introduction of these documents was proper—and it most decidedly was not[13]—they cannot hold the weight that SoundExchange would have them bear.

83. To start, many of the documents trotted out by SoundExchange themselves show that [redacted]. For instance, TX 5413*—an [redacted] that SoundExchange highlighted in its opening slides—actually states that [redacted]" TX 5413*; *see also* 8/13/20 Tr. 1870:13-20 (Orszag) ([redacted]"); *see also id.* at Tr. 1875:16-19 ([redacted]). Likewise, Orszag admitted that TX

[13] The Services objected to the use of these newly identified negotiation documents throughout the hearing, and they remain subject to objections addressed at length in the Services' pre-trial evidentiary submissions.

5221—another [redacted]—"[redacted]" 8/13/20 Tr. 1881:4-8. The document itself states that "[redacted]" and attributes [redacted]. TX 5221 at 1, 5.

84. And for every document that SoundExchange points to, scores more identify other points in the negotiation as more important [redacted]

TX 4050 at 2. [redacted]. 9/3/20 Tr. 5715:12-16 (Harrison) (discussing TX 4050) [redacted]"); *see also* Leonard CWRT ¶ 67 (discussing document and concluding that "Mr. Orszag's claims about the increased bargaining power of the interactive services generally are also inconsistent with the documentary and testimonial evidence obtained in discovery").

85. In any event, [redacted]—because the major record labels are must-haves for Spotify. *See, e.g.*, 8/18/20 Tr. 2651:25-2652:17 (Shapiro) (describing lack of meaningful carriage competition with must-have labels); *id.* at 3057:15-17 ("There's no reason for this label to agree to some competitive rate when they can shut down the service."). As Professor Shapiro testified, when the fallback position with must-have labels is service shut-down, the gains from trade are split based on that fallback position; even if steering may cause some modest variation on the margin, the market power gained from the shut-down possibility will dominate the rates, which will still be at the complementary oligopoly level. *Id.* at Tr. 3055:21-3057:23 (Shapiro).

86. Indeed, labels understood that—[redacted]. 9/9/20 Tr. 5929:17-24 (Sherwood) ("[redacted]"); *id.* 5930:8-5931:12 (noting that [redacted]

[redacted]).

(iv) Label Witnesses Conceded They Did Not Compete on Price[redacted]

87. Whatever the so-called [redacted]. In other words, they did not try to undercut each other on price or even match the price of another label as a way to obtain greater market share. In fact, they were unequivocal: they *never* compete on price.

88. UMG's Harrison admitted [redacted]. He agreed that it "[redacted]." 9/3/20 Tr. 5705:2-7. In a similar vein, he agreed that he "[redacted]." *Id.* at Tr. 5705:15-20; *see also* Shapiro WRT at 17 (discussing same); Leonard CWRT ¶ 60 (same). And Mr. Harrison candidly admitted that "[redacted]" *Id.* at 5701:12-19. As he put it, "[redacted]" *Id.*

89. Warner's Adadevoh testified to similar effect. She had no recollection of [redacted]" 9/3/20 Tr.

5545:19-5545:24. [redacted]. *Id.* at Tr. 5545:25-5546:8. Moreover, "[redacted]." *Id.* at 5546:9-13. [redacted]. *Id.* at 5550:14-18 [redacted]"); *see also* Leonard CWRT ¶ 60 (discussing same).

90. The same is true for Sony's Piibe. He agreed that [redacted]. 9/2/20 Tr. 5341:20-25 (Piibe) ("[redacted]""). As he more succinctly put it, "[redacted]" 9/2/20 Tr. 5343:11-13. Indeed, internal Sony documents show that Sony [redacted]. TX 4070 ("[redacted]. . . ."); *see also* 9/2/20 Tr. 5318:20-5319:11 (Piibe) (discussing exhibit). [redacted]. 9/2/20 Tr. 5339:23-5340:11 (Piibe) ("[redacted]

[redacted]").

91. Experts on both sides similarly concluded that the labels never competed on price—a sign that the market is not effectively competitive. Shapiro observed that "in an effectively competitive market, one typically sees at least some sellers offering lower prices than their rival suppliers to gain market share." Shapiro WRT at 5. In the markets for the licensing of recorded music, price competition occurs "when a record company offers a lower royalty rate to a music service to increase its share . . . relative to rival suppliers." *Id.*; *see also id.* at 8 ("[E]vidence of price competition would take the form of record companies regularly offering lower royalty rates to interactive services to increase their share of performances on these services."). None of that price competition happened here. Dr. Leonard agreed, finding that "there is no evidence of price competition among labels to be included in the libraries of interactive services." Leonard CWRT ¶ 60. Finally, Mr. Orszag admitted that the so-called "[redacted]. 8/12/20 Tr. 1719:7-17 (Orszag); *see also id.* 1886:13-17, 1887:2-16 ([redacted]).

(v) [redacted] Agreements Expressly [redacted]

92. Finally, SoundExchange has no meaningful response to the fact that the agreements between [redacted]. Leonard CWRT ¶ 60-63 (highlighting [redacted] *see also* 8/25/20 Tr. 3716:13-3717:1 (Peterson); Peterson WRT ¶¶69-70 (the labels have imposed [redacted] on the on-demand services, and these have not been relaxed or removed in recent years); 8/12/20 Tr. 1699:25-1701:20, 1704:1-13 (Orszag) (admitting that all of Spotify's and Apple's agreements with the Majors have, and have always had [redacted]).

93. Each of Spotify's agreements with the Majors [redacted].

94. *Sony*. "[redacted]" TX 5011 at 36 (Sony-[redacted] 2017); *see also* TX 5074 at 22 ([redacted]

95. *UMG*. "[redacted]

[redacted]" TX 5037 at 45, 96 (UMG-[redacted] 2017); *see also* TX 2062 at 38 ([redacted]

96. *Warner*. "[redacted]" TX 5020 at 20; *see also id.* at 36 ("[redacted].").[redacted] *See* TX 5038 at 24 ("[redacted]"). *See also* 9/3/20 Tr. 5549-11, 5550:19-5551:1, 5557:15-19, 5558:24-5559:3, 5560:19-5561:11-17 (Adadevoh) ([redacted]

[redacted].).

97. Experts for both sides confirmed the [redacted]. *See, e.g.*, 8/12/20 Tr. 1709:17-21 (Orszag) ([redacted]); Leonard CWRT ¶ 66 ("In fact, [[redacted]].").

98. None of SoundExchange's efforts to account for these provisions has merit. *First*, SoundExchange's lack-of-enforceability argument is undermined by the record labels themselves, [redacted]. [redacted]. 9/3/20 Tr. 5563:13-5565:5 (Adadevoh) ([redacted]). [redacted]. *See* TX 2051 at 17 ([redacted]); 9/3/20 Tr. 5567:7-5568:4 (Adadevoh) (discussing same); TX 2108 at 3-4 ([redacted]); 9/3/20 Tr. 5567:2-5 (Adadevoh) ([redacted]). While these [redacted] make clear that "[redacted]

[redacted]. Leonard CWRT ¶ 66. What is more, though [redacted]. 9/3/20 Tr. 5563:13-5565:15 (Adadevoh) ([redacted]); *id.* 5561:22-5562:1 ([redacted]); 8/25/20 Tr. 3720:24-3721:16 (Peterson); Peterson AWRT ¶ 73 ([redacted]); TX 2050 (example of [redacted]).

99. Moreover, SoundExchange's claims that labels could not enforce these provisions were belied by contemporaneous label documents. Canvasing these documents, Leonard noted that "[redacted]" Leonard CWRT ¶ 66. Orszag himself "assume[s] that as part of [his] work" that companies adhere to contractual provisions. 8/12/20 Tr. 1715:3-19 (Orszag) (assumes large companies adhere to contractual provisions)

100. *Second*, SoundExchange's contention that [redacted] has no merit either. *See* 8/11/20 Tr. 1254:15-1255:8 (Orszag) ([redacted]). But it is the [redacted] in the *existing* agreements—including with the *other* record

companies—that matter; those agreements do not simply roll off. *See, e.g.* 9/3/20 Tr. 5551:7-10 (Adadevoh) ([redacted]); *id.* at 5704:16-5705:1 (Harrison) ([redacted]). [redacted]. *See, e.g.*, Peterson AWRT ¶ 69 ([redacted]). In fact, more or less since Spotify launched in the United States, [redacted]. 8/12/20 Tr. 1703:24-1704:13 (Orszag) (conceding that for all the major agreements [redacted]); *see also* Leonard CWRT ¶ 63 ("Importantly, [redacted].").

101. Indeed, the major labels saw [redacted]. Not a single Major reacted by trying to compete on price, [redacted]." [redacted] *See* 8/25/20 Tr. 3715:22-3716:5 (Peterson) (complementary oligopolists have the ability to neutralize steering (e.g., by imposing two-part tariffs)). As an internal Universal document put it, "[redacted]

[redacted]" TX 4016 at 1; *see also* Shapiro WRT at 17-18 (noting that additional support for the fact that [redacted]. An internal Warner document made the same point: [redacted]" TX 4028; *see also* Shapiro WRT at 22 (discussing that the Majors recognized that these [redacted] protected them against a "race to the bottom" in the form of reduction in royalty rates).

102. The [redacted]. They also insisted on [redacted]. As discussed before, [redacted] has some playlists that feature non-music content such as the sounds of the ocean. [redacted]. *See* 8/13/20 Tr. 1888:17-1888:8 (Orszag) ([redacted]

[redacted]). These [redacted] Shapiro WRT at 18 & n.48.

103. Those provisions make plain that [redacted]. *See, e.g.*, TX 5020 at 11 (Warner-[redacted] 2013 Agreement) ([redacted]); TX 4044 (Warner-[redacted] 2017 Agreement) ([redacted]); TX 5037 at 21 (UMG-Spotify) ([redacted]

[redacted]).

104. Record company documents reveal that the Majors [redacted]. TX 4018 at 3 (Sony) ([redacted]); TX 4019 at 1 (UMG) ([redacted]); TX 4020 at 1 (Warner) ([redacted]).

(vi) Interactive Services Remain Primarily On-Demand Services—Any Steering Ability Via Service Playlist Curation Is Limited

105. Finally, were there any lingering doubts about [redacted], they are dispelled by the simple fact that [redacted] remains an on-demand service and that most plays on interactive services do not come through service-curated playlists.

106. For interactive services such as Spotify, "[redacted]" Leonard CWRT ¶ 73. Indeed, [redacted]"" *Id.* (citing TX 2122 at 8 ([redacted])). That ability to listen to a song on demand is the primary driver of upgrading to interactive services—and a key way that interactive services differ from the webcasting services at issue in this proceeding. TX 2041 at 21 (control and on-demand functionality primary driver of upgrading to interactive service); *see also* Leonard CWRT ¶ 73 ("Indeed, song selection and control over the music drive subscribers to choose interactive services over other available music services. For example, a study of new subscribers on Apple Music indicated that, as compared to other services, [redacted].").

107. Moreover, service-generated playlist listening—the kind of playlist listening over which a service might exercise curatorial control—accounts for only about 32% of plays. 8/12/20 Tr. 1528:22-25, 1532:23-1533:4, 1538:10-13 (Orszag). During the hearing, Mr. Orszag conceded that even if his written testimony claimed that up to 68% of listening on Spotify as of 2017 was "lean-back," that figure included user-generated playlists (36%, or more than half of

the 68%). Orszag ¶ 61; 8/12/20 Tr. 1520:14-1522:19, 1524:2-7. Services, of course, do not control what users listen to on their own playlist, and they could not steer content on those playlists. What is more, even if listening to a user-created playlist could be appropriately characterized as lean-back listening, that form of consumption has many interactive elements that are not replicable on a statutory service. 8/12/20 Tr. 1507:15-1508:15 (Orszag); *id.* at 1513:12-19 (acknowledging that the act of creating a playlist on an interactive service is "clearly a lean-forward action"); 9/3/20 Tr. 5521:25-5523:12 (Adadevoh) (conceding the myriad of interactive features available on user-generated playlists that are not permissible under the statutory license); *see also* 8/25/20 Tr. 3701:15-20 (Peterson) (describing user generated playlists as a form of on-demand listening). In addition, as Mr. Orszag conceded, playlist sharing among users has a network effect that the interactive services can offer (and noninteractive services cannot). 8/12/20 Tr. 1526:18-1528:3 (Orszag).

108. Finally, for all of Orszag's (and SoundExchange's) emphasis on service-generated playlists, they have not shown that the convergence between interactive and noninteractive on the record in *Web IV* has changed or increased (such that adjustments made in *Web IV* are no longer necessary). 8/12/20 Tr. 1542:23-1543:5, 1544:12-1545:8 (Orszag); 8/24/20 Tr. 3438:6-3439:18 (Leonard); Leonard CWRT ¶¶ 40-49 (discussing absence of evidence of convergence).

2. [redacted] Are Not "Must-Haves" for the Labels

109. Mr. Orszag contends that [redacted] have become "must haves" for the major labels because, purportedly, the labels are now [redacted] Orszag WDT ¶ 107; 8/11/20 Tr. 1264:6-21; 8/12/20 Tr. 1628:18-24; *see also, e.g.,* 8/25/20 Tr. 3712:5-9 (Peterson); Peterson AWRT ¶ 5.

110. Mr. Orszag's theory is predicated on the idea that [redacted] Orszag WDT ¶¶ 127-28, 136; *see also* Peterson AWRT ¶¶ 5, 65. [redacted] Orszag WDT ¶¶ 128, 130-31; *see also* Peterson AWRT ¶ 64. The alleged result is greater bargaining leverage for [redacted] that counterbalances the complementary oligopoly power of labels and thus leads to something approximating competitive rates. Orszag WDT ¶ 135; *see also* Peterson AWRT ¶ 5. Mr. Orszag previously presented the same argument in 2017, in *SDARS III*, and the Judges rejected it (see *supra* ¶ 60); 8/12/20 Tr. 1619:5-1621:17 (Orszag). The argument still fails, for the same and other reasons.

111. Notably, Mr. Orszag does not argue that [redacted] are must-haves for the labels in the same sense that the Majors are must-haves for the interactive services. *See, e.g.*, 8/12/20 Tr. 1640:11-16 (Orszag) (suggesting that the term "must have" is "loosely used"). For example, he does not claim that [redacted] 8/12/20 Tr. 1629:23-1630:2, 1630:9-13 (Orszag). [redacted]. 8/12/20 Tr. 1632:7-17, 1633:7-12 (Orszag). [redacted]

[redacted] 8/12/20 Tr. 1633:13-20 (Orszag); 8/18/20 Tr. 2646:24-2647:9 (Shapiro).[14]

(i) The correct lens for assessing bargaining power is the outcome of a sustained disagreement, under which it is clear that Spotify and Apple do not have offsetting bargaining power

112. Mr. Orszag's analysis erroneously focuses on the short-term effects of a disagreement, whereas the relevant factor for assessing bargaining power is the result that would occur if there were long-term, sustained disagreement. 8/25/20 Tr. 3712:10-3713:5 (Peterson); Peterson AWRT ¶¶ 6, 66; 8/19/20 Tr. 2860:1-4 (Shapiro); Shapiro WRT at 11 (noting that the correct measure is not the immediate impact, but the present discounted value impact, which also includes long-term effects).

113. [redacted]. 8/25/20 Tr. 3713:6-16 (Peterson); Peterson AWRT ¶¶ 65-66; 8/19/20 Tr. 2858:16-2859:25 (Shapiro); Shapiro WRT at 11-12. [redacted] 8/25/20 Tr. 3713:19-3714:4 (Peterson); *see also* 8/19/20 Tr. 2859:20-22 (Shapiro).[15]

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[14] [redacted]. *See, e.g.*, Shapiro SCWDT at 13 n.13.

[15] Mr. Orszag argues that the alleged increase in lean-back listening would blunt the blow, but it makes no sense to argue that Spotify subscribers do not care about the on-demand features they are paying to get. Orszag WDT ¶ 136; Peterson AWRT ¶ 65; Leonard CWRT ¶¶ 45-46, 73 ("In fact, numerous studies show that on-demand functionality is a primary driver of user demand for subscription interactive services."); *see also* 9/3/20 Tr. 5730:5-18 (Harrison) ([redacted].

114. [redacted] Thus, a cutoff would cost the label roughly that amount on day one but that cost would fall as users began to migrate. 8/25/20 Tr. 3714:5-14 (Peterson); 8/19/20 Tr. 2859:4-25 (Shapiro); Shapiro WRT at 10-11. Assuming [redacted] would shut down within about a year, over the course of that year the label would in reality lose [redacted] as subscribers left and migrated to other platforms. Shapiro WRT at 10-11; 8/19/20 Tr. 2859:4-25 (Shapiro); 8/25/20 Tr. 3714:15-20 (Peterson); Peterson AWRT ¶ 66; *see also* Leonard CWRT ¶¶ 73-75 (describing the substitutability of interactive services and how users would switch from a service that could not provide on-demand functionality).

115. In sum, the ultimate outcome of a sustained disagreement, the relevant metric here, is that the label would suffer a temporary loss of revenue but survive, whereas [redacted] would lose everything and shut down. 8/25/20 Tr. 3714:21-3715:12 (Peterson); Peterson AWRT ¶¶ 6, 66; 8/19/20 Tr. 2859:4-25 (Shapiro); Shapiro WRT at 10-11.

116. The labels would see an additional benefit in quelling the demand for lower rates by standing their ground. *See* 8/25/20 Tr. 3715:7-11 (Peterson); 8/20/20 Tr. 3102:9-3104:6 (Shapiro) ([redacted]). Thus, contrary to SoundExchange's arguments, *see* Orszag WDT ¶ 135, the [redacted]. *See* 9/3/20 Tr. 5732:23-5733:5 [redacted]

[16] Mr. Orszag concedes that the appropriate time frame for analyzing bargaining power is circa 2017, when the deals were being negotiated and then executed, as opposed to the present time. 8/12/20 Tr. 1615:12-19.

117. Professor Shapiro provides a calculation of the unequal bargaining power between [redacted] using Mr. Orszag's own data and reasonable assumptions. *See* 8/19/20 Tr. 2860:5-17, 2865:9-2866:1 (Shapiro); Shapiro WRT at 11-12. He concludes that not licensing would only cause Sony [redacted]% of the present discounted value of its royalty income, whereas [redacted]% of the present discounted value of its revenue and profits in the event of a failed negotiation. Shapiro WRT at 12; *see also* 8/19/20 Tr. 2860:5-17, 2865:9-2866:1 (Shapiro). This confirms that Mr. Orszag's claim of equal bargaining power is false. Orszag WDT ¶¶ 112-113; *see also* 8/19/20 Tr. 2860:18-23 (Shapiro); Shapiro WRT at 12-13 (explaining why Mr. Orszag's arguments are not responsive to the above analysis).

118. Dr. Leonard similarly explains that "a subscription interactive service likely would have to give immediate discounts on subscription fees to disgruntled users who were not getting what they paid for, [and] would suffer subscriber losses given the ease of switching to other services . . . ." Leonard CWRT ¶ 77. On the other hand, the label "would recapture a portion of the royalties via other channels to which users turned to hear the label's music[, and] would have a greater ability to wait out the impasse, given that it would continue to receive royalties from other sources, whereas the service's entire subscription revenues would potentially be at risk given that it was not able to meet the primary driver of demand for an interactive service." *Id.* (agreeing that Mr. Orszag's claim "that a label would be hurt more than a service by a bargaining impasse . . . is unsupported"); *see also* Orszag WDT ¶¶ 135-136.

119. In sum, because the labels' catalogs remain must-have in the sense that the labels can shut down [redacted], they have complementary oligopoly market power and a competition adjustment is necessary. *See* Peterson AWRT ¶¶ 35, 68; *see also* Shapiro WRT at 4 ("Effective competition is not possible in the presence of one or more "must-have" record

companies, notwithstanding the fact that a digital music service might negotiate intensely against the record companies to seek lower rates or have certain points of bargaining leverage that it can use in such negotiations to entice record companies to agree to lower rates.”).

120. Ironically, one significant reason that interactive services comprise a growing share of record company revenue is precisely because of the high rates they pay as a result of the *labels’* market power, not because those services have significant countervailing bargaining power. *See* Shapiro WRT at 13 (“Mr. Orszag is effectively arguing that the interactive services have bargaining power based on a measure that is inflated by their *weak* bargaining position due to the complementary oligopoly power of the record companies.”).

(ii) At trial, SoundExchange witnesses conceded relevant facts dispelling the notion that [redacted] in the long run

121. SoundExchange witnesses conceded at trial that [redacted] a disagreement were short-term focused—at odds with the long-term perspective that is appropriate as a matter of economics. *See, e.g.*, 9/3/20 Tr. 5511:18-5512:12 (Adadevoh) [redacted] TX 5077 at 3 (same); 8/11/20 Tr. 1293:25-1294:15 (Orszag) (admitting he has not done any independent analysis of [redacted]; 9/3/20 Tr. 5723:19-5724:15 (Harrison) (UMG [redacted] 9/3/20 Tr. 5725:13-5726:17 (Harrison) (admitting he is not aware of any data or studies regarding [redacted] *see also* 9/9/20 Tr. 5930:8-5931:16 (Sherwood) (Warner did not have [redacted]

[redacted]).

122. Further, label executives conceded that UMG's, Sony's, and Warner's catalogues [redacted]. 9/3/20 Tr. 5730:5-14 (Harrison) (discussing all three major labels); Piibe WDT ¶ 11 [redacted]; *see also* 9/3/20 Tr. 5731:11-15 (Harrison) (admitting that [redacted]

123. Mr. Piibe and Mr. Harrison also conceded at trial that their written testimony [redacted] *See, e.g.*, 9/2/20 Tr. 5388:8-18 (Piibe) (Sony did not do any analysis [redacted] 9/3/20 Tr. 5731:16-5732:10 (Harrison) (admitting that he [redacted] *see also, e.g.*, 9/2/20 Tr. 5381:6-5382:17 (Piibe) [redacted] 9/3/20 Tr. 5730:19-5731:7 (Harrison) (UMG is not [redacted] *Id.* at 5677:14-20 (Harrison) (admitting that [redacted]).

124. In addition, label executives admitted that [redacted]. 9/2/20 Tr. 5424:14-5425:18 (J. Fowler) [redacted]

[redacted]); 9/9/20 Tr. 5932:4-22 (Sherwood) [redacted]

125. Mr. Piibe testified that Sony [redacted] However, Mr. Piibe did not provide any support for this remarkable conclusion, and his colleague Ms. Fowler testified that [redacted] 9/2/20 Tr. 5424:17-5425:3 (J. Fowler); *see also* 9/9/20 Tr. 5932:4-22 (Sherwood) (Warner would [redacted] Moreover, as demonstrated by Professor Shapiro and discussed above, [redacted] as Mr. Piibe hyperbolically suggested at trial. Mr. Piibe also could not say whether Sony has ever [redacted] 9/2/20 Tr. 5360:11-18 (Piibe).

(iii) SoundExchange's claim that a blackout would [redacted] are speculative and unsupported.

126. Mr. Orszag's claim that [redacted] is purely speculative and unsupported by the evidence. *See, e.g.*, 8/11/20 Tr. 1286:9-15 (Orszag) [redacted].

127. *First*, [redacted] 8/19/20 Tr. 2866:3-2867:5 (Shapiro); 8/20/20 Tr. 3098:8-14 (Shapiro); Shapiro WRT at 14. All the SoundExchange testimony on this point is premised on the misleading and inappropriate short-term assumption [redacted]. *Id.* As discussed (see *supra* ¶ 112), however, the relevant factor for assessing bargaining power is the losses each party would suffer if there were long-term, sustained disagreement, in which case [redacted]. Shapiro WRT at 14.

128. *Second*, [redacted] 8/20/20 Tr. 3099:19-3100:10 (Shapiro); 9/3/20 Tr. 5738:6-24 (Harrison) [redacted] There is no record evidence regarding whether a [redacted] *See, e.g.*, 9/9/20 Tr. 5952:15-5954:16 (Sherwood) (admitting, despite his testimony [redacted] (emphasis added), that he has no knowledge of [redacted]

129. *Third*, there is no testimony or other evidence regarding [redacted] *See* 8/20/20 Tr. 3098:25-3099:10 (Shapiro); *see also* 9/2/20 Tr. 5426:25-5427:3 (J. Fowler) ("[redacted]").

(iv) Mr. Orszag's HHI analysis does not support equal bargaining power

130. Mr. Orszag contends that the Herfindahl-Hirschman Index ("HHI"), which measures market concentration, is greater on the buying side (interactive services) than on the selling side (labels); however, HHI is completely uninformative here because the labels are must-haves to the interactive services and thus complements rather than substitutes. 8/19/20 Tr. 2867:8-24 (Shapiro); Shapiro WRT at 13 (observing that "[e]ven a single service controlling an entire downstream market . . . would lack monopsony power in the upstream market if that service accounted for a small share of record company revenue" and that "[t]he HHI is not remotely meaningful or informative as a metric of competition if one is measuring revenue from complements."); *see also* Leonard CWRT ¶ 70.

131. Moreover, based on Mr. Orszag's own methodology, HHI on the services' side [redacted] Leonard CWRT ¶ 69 & n.143. Mr. Orszag admits that he did not conduct that analysis or otherwise look at HHI changes over time. 8/12/20 Tr. 1680:1-7, 1685:20-25.

132. Mr. Orszag concedes that interactive streaming is a highly competitive marketplace. *See, e.g.*, 8/12/20 Tr. 1670:23-1671:23 (interactive streaming is a robust market and has seen a large increase in competitors since *Web IV*); *see also* 8/12/20 Tr. 1690:3-20, 1669:6-15, 1674:3-16 (Orszag) ([redacted]

[redacted]). In addition, he acknowledges that there have not been significant barriers to entry. *See* 8/12/20 Tr. 1691:10-1692:10 (Orszag) [redacted]; *accord*, Leonard CWRT ¶¶ 78-79 (discussing how there are no significant barriers to entry or expansion, and "any service could easily expand to accommodate users switching from other services"); *see also* 9/3/20 Tr. 5725:7-12 (Harrison) [redacted]

133. HHIs and market shares are "economically meaningless" and not indicative of market power where, as here, there are no significant barriers to entry or expansion. Leonard CWRT ¶ 71. In fact, as a matter of economics, the services cannot possess monopoly or monopsony power without barriers to entry—much less enough power to counterbalance the complementary oligopoly power of labels. *See, e.g.*, *United States v. Microsoft Corp.*, 253 F.3d 34, 82 ("[A] firm cannot possess monopoly power in a market unless that market is also protected by significant barriers to entry."). Further, each of [redacted] for inferring monopoly power in markets that *do* have barriers to entry. Leonard CWRT ¶ 70 & n.144; *see also* 8/18/20 Tr. 2645:14-2646:20 (Shapiro) (neither Spotify nor Apple has a monopoly).

134. Mr. Orszag concedes that the interactive streaming market has elements of contestability, meaning actual entry is not needed for competitive rates due to the threat of entry. 8/11/20 Tr. 1271:14-1272:10 (Orszag). He further concedes that HHI "does not prove the presence of market power", particularly in contestable markets, and that "one needs to do much further analysis." 8/12/20 Tr. 1678:3-1679:10. Mr. Orszag admits HHI is simply an "initial

screen to then consider other issues." 8/12/20 Tr. 1678:13-14; *accord*, Leonard CWRT ¶ 70 (HHI's "proper use is limited to serving as an initial 'screen[.]'").

135. In any event, even if [redacted] were must-have in the sense that the labels would not be commercially viable without it, that would not result in effective competition so long as the labels are must-haves. 8/18/20 Tr. 2643:23-2645:12 (Shapiro) (distinguishing this kind of "mutual [assured] destruction" from effective competition). As Professor Shapiro explained, "Effective competition is not possible in the presence of one or more 'must-have' record companies, notwithstanding the fact that a digital music service might negotiate intensely against the record companies to seek lower rates or have certain points of bargaining leverage that it can use in such negotiations to entice record companies to agree to lower rates. Monopolists routinely negotiate with their buyers and make concessions in those negotiations, but that does not signify that they lack monopoly power or that such negotiations result in outcomes that reflect the workings of an effectively competitive market." Shapiro WRT at 4; *see also* 8/18/20 Tr. 2645:4-12 (Shapiro) (bilateral monopoly can lead to intense bargaining because of enormous gains from trade but "it's not effective competition or anything like it").

(v) Mr. Orszag's theory that recent [redacted] were due to [redacted] becoming "must have" is undercut by the data

136. [redacted] *ee, e.g.*, 8/12/20 Tr. 1501:20-22 (Orszag) (conceding that [redacted]); 9/3/20 Tr. 5588:11-5591:1 (Adadevoh) (conceding that

[redacted]); *see also* Peterson AWRT ¶ 78 ("[redacted]").

137. In fact, since *SDARS III*, [redacted] Shapiro WRT at 23 Fig. 1. During that same period, the average effective royalty rate across all subscription interactive services [redacted] *Id.*; 8/19/20 Tr. 2889:17-2890:5 (Shapiro). Further undercutting claims that [redacted]. Peterson AWRT ¶ 78; Orszag WDT ¶ 152. In fact, Mr. Orszag's own calculations show that [redacted] Orszag WDT at ¶ 152 tbl. 14. Instead, the evidence shows that [redacted] were due to concerns over the [redacted], which is consistent with the labels behaving as complementary oligopolists. *See infra* ¶¶ 148-150).

3. [redacted] is much better explained by other factors consistent with complementary oligopoly and not steering-based price competition

138. As discussed in the previous sections, Mr. Orszag argues that the growth of interactive streaming services such as [redacted] and [redacted] and their [redacted]

[redacted]. Orszag WDT ¶ 151-52; *see also* Piibe WDT ¶ 46; Harrison WRT ¶ 23. However, Mr. Orszag's narrow thesis of price competition engendered by the supposed "enhanced bargaining power" and steering capabilities of [redacted] is belied by the negotiation record presented at the hearing concerning [redacted] (from which the rates serving as Mr. Orszag's principal benchmark are derived). *Id.* A careful analysis of that negotiation record makes clear that [redacted] is much better explained by the desire of the [redacted], and more consistent with the forces of complementary oligopoly than with [redacted]. As detailed in the following subsections, [redacted]. 8/19/20 Tr. 2864:12-23 (Shapiro); *see also id.* 2870:15-19 (same); Leonard CWRT ¶ 67; Peterson AWRT ¶ 77.

(i) [redacted]

139. A thorough examination of the negotiation history reveals that [redacted] *See* Shapiro WRT at 20; Leonard CWRT ¶ 67. An internal Warner email and presentation, for example, indicated that [redacted] TX 4021 at 3; *see also* 8/19/20 Tr. 2883:21-2885:10 (Shapiro) (discussing the same). Similarly, an internal UMG email stated that [redacted]

[redacted].” TX 2131; *see also* 8/19/20 Tr. 2871:2-13 (Shapiro); Peterson AWRT ¶ 79; TX 4022 at 1-2 (call notes from WMG [redacted]”).

140. Consistent with the documentary record, the record label witnesses testified at the hearing that [redacted]. *See, e.g.*, 9/3/20 Tr. 5569:8-23 (Adadevoh) (stating that [redacted] *id.* 5715:17-5716:3 (Harrison) [redacted]; *id.* at 5179:19-21 (explaining his understanding that [redacted] 9/2/20 Tr. 5264:4-10 (Piibe) (testifying that [redacted]

141. [redacted]. *See, e.g.*, TX 4026 at 1 (Sony executive [redacted]”). The Majors, for their part, also [redacted] *See* 8/19/20 Tr. 2882:25-2883:9 (Shapiro). Mr. Piibe testified at the hearing that Sony [redacted]

[redacted]. 9/2/20 Tr. 5354:7-14 (Piibe); *id.* 5354:22-5355:7. *Id.* Likewise, Ms. Adadevoh testified that WMG [redacted] 9/3/20 Tr. 5580:8-10 (Adadevoh), [redacted] *id.* at 5583:7-14—and conceded that, [redacted]. *Id.* 5583:18-24. Mr. Harrison concurred that Universal—[redacted] *See* 9/3/20 Tr. 5718:2-9 (Harrison).

142. An email from UMG [redacted].” TX 4023 at 1 (emphasis added); *see also* Shapiro WRT at 17-18 (discussing the same).

143. Faced with such evidence, Mr. Orszag was compelled to acknowledge at the hearing that [redacted] 8/11/20 Tr. 1367:4-5, 12-13 (Orszag); [redacted] 8/13/20 Tr. 1888:24-1889:14 (Orszag); [redacted] *id.* 1890:16-1891:1, 1891:22-1892:6. Mr. Orszag also clarified that he did not refute the veracity of [redacted]

[redacted] 8/13/20 Tr. 1896:12-17 (Orszag).[17]

144. Even more important than the immediate concerns over the [redacted] *See* Shapiro WRT at 20-21; Leonard CWRT ¶ 67; Peterson AWRT ¶¶ 78-81. To that point, an email to [redacted] TX 4024 at 2. These sentiments were echoed months later in a draft email [redacted] TX 4052 at 2.

145. Mr. Harrison agreed at trial that [redacted]

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[17] Mr. Orszag later hedged on this concession, contending that had the [redacted] *See* 8/11/20 Tr. 1367:4-15 (Orszag). Later correspondence, however, suggests they did just this: [redacted] TX 2127 at 6. In any event, as Professor Shapiro explained, [redacted] 8/19/20 Tr. 2888:3-25 (Shapiro).

[redacted].” 9/3/20 Tr. 5719:6-10 (Harrison). [redacted]

[redacted]

TX 4026 at 1-2; *see also* TX 4025 ([redacted]”); Shapiro WRT at 17-18 (discussing the same); *see also* Peterson AWRT ¶ 80 (“[redacted]”). [redacted]).” Leonard CWRT ¶ 67.

146. Consistent with the [redacted]

[redacted]. *See* Adadevoh WDT ¶ 21, Harrison WDT ¶¶ 22, 24, 66, Piibe WDT ¶ 31. [redacted] *Id.* [redacted] Mr. Harrison acknowledged at the hearing that Universal [redacted] 9/3/20 Tr. 5712:6-19 (Harrison). The documentary record shows [redacted]. Orszag WDT ¶ 127 & Tbl. 13.[18]

147. [redacted] Mr. Harrison discussed this dynamic—essentially an exercise in [redacted]—at length on the witness stand, explaining that a [redacted] *See* 9/3/20 Tr. 5721:6-18 (Harrison). He further explained

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[18] The label witnesses each provided computations suggesting that they [redacted] Adadevoh WDT ¶ 18, Harrison WDT ¶ 32, Piibe WDT ¶ 32. [redacted]*ee, e.g.*, TX 4022 at 1 [redacted] 9/3/20 Tr. 5721:19-5722:11 (Harrison) [redacted]

that [redacted] 9/3/20 Tr. 5749:16-5752:17 (Harrison). The unmistakable implication of Mr. Harrison's testimony: UMG [redacted] Harrison WDT ¶ 41.

(ii) [redacted]

148. As the Service economists testified, the [redacted]—inspired by the [redacted]—is consistent with the behavior of complementary oligopolists, not price competitors. [redacted] *See* 9/3/20 Tr. 5705:15-20 (Harrison). To the contrary, Universal [redacted] 8/20/20 Tr. 3058:3-13 (Shapiro); 8/13/20 Tr. 1905:23-1906:2 (Orszag) [redacted]; *see also* 9/3/20 Tr. 5705:21-5706:14 (Harrison). As Professor Shapiro testified, true price competition in an effectively competitive market would involve a supplier lowering price with the hope that rival suppliers will *not* match that price (so that the lower price attracts more buyers and the supplier therefore gains market share). 8/19/20 Tr. 2872:4-10. However, in a market infected by complementary oligopoly power, where the suppliers are

complements rather than substitutes, one expects to see [redacted] *Id.* at 2872:11-20 (Shapiro) [redacted]; 8/25/20 Tr. 3656:15-3657:21 (Peterson).

149. The goal of the [redacted] as noted above, was [redacted]. Dr. Peterson explained that the [redacted] 8/25/20 Tr. 3722:12-19 (Peterson); Peterson AWRT ¶¶ 5(c), 79-81. Professor Shapiro echoed this observation: [redacted] 8/19/20 Tr. 2881:1-5 (Shapiro); *see also id.* 2864:12-23, 2870:15-19, 2880:2-20 [redacted] Key to this dynamic, according to Professor Shapiro, is that [redacted] *Id.* 2871:14-25 (Shapiro) ([redacted] *id.* 2880:21-2881:16 (Shapiro) [redacted]

150. [redacted]. In fact, Mr. Harrison testified that Universal [redacted] 9/3/20 Tr. 5712:22-5714:15. [redacted] *Id.*

(iii) [redacted]

151. As alluded to above, [redacted] Thus, Universal— [redacted] *See* TX 5037 at 36 [redacted]; 9/3/20 Tr. 5706:4-18 (Harrison) [redacted] 8/13/20 Tr. 1903:10-14 (Orszag) [redacted] 8/19/20 Tr. 2872:21-2873:5 (Shapiro) (same). Warner and Sony likewise [redacted]. At the hearing, Ms. Adadevoh [redacted]

[19] TX 4044 (2017 Warner Agreement) at 22 [redacted] X 5011 (2017 Sony Agreement) at 51 [redacted]).

[redacted].[20] 9/3/20 Tr. 5550:2-11; *see also* TX 4021 at 8 [redacted] 8/19/20 Tr. 2886:7:18 (Shapiro) [redacted]

152. [redacted]. As Professor Shapiro explained, [redacted] 8/20/20 Tr. 3062:19-3063:21. [redacted] *Id.* at 3063:22-3066:09 (Shapiro).

153. Mr. Orszag argues that [redacted] 8/13/20 Tr. 1902:2-1903:17 (Orszag). This explanation does not hold water. *First*, Mr. Harrison flatly denied [redacted] *see* 9/03/20 Tr. 5705:15-20

[20] Ms. Adadevoh also explained that [redacted] 9/3/20 Tr. 5584:1-13 (Adadevoh).

(Harrison), and, contrary to Mr. Orszag's claims, 8/12/20 1902:2-1905:3 (Orszag), [redacted] 8/19/20 2873:21-24 (Shapiro). *Second*, Mr. Orszag himself argued that [redacted] 8/13/20 Tr. 1906:3-24 (Orszag). *Third*, as just explained, because [redacted] 8/19/20 Tr. 2876:3-2877:19 (Shapiro); 8/13/20 Tr. 1905:16-1906:6 (Orszag). Not surprisingly, when Warner [redacted] *See* Shapiro WRT at 17-18 (discussing TX 4014); *see also* 9/3/2020 Tr. 5537:3-12, 5539:6-10, 5540:1-5 (Adadevoh) (same).

154. Mr. Orszag discussed *ad nauseam* the fact that [redacted] *See* 8/12/20 Tr. 711:2-10; 1717:8-14 (Orszag); 8/13/20 Tr. 1907:14-1908:9 (Orszag). [redacted]

[redacted] 8/13/20 Tr. 1907:14-1908:9 (Orszag).

155. Moreover, the effort to [redacted] *See* Leonard CWRT ¶¶ 63, 80 ([redacted]). As Dr. Peterson testified, [redacted] Peterson AWRT ¶ 75. Professor Shapiro noted similarly that [redacted] 8/19/20 Tr. 2878:20-24.[21] [redacted] *See* TX 4044 at 14-15 [redacted]; TX 5011 at 36 [redacted] TX 5037 at 63 [redacted].[22]

156. In sum, "the evidence clearly shows that these [redacted] 8/19/20 Tr. 2877:13-19 (Shapiro); *see also* Shapiro WRT at 19 [redacted]

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[21] As Professor Shapiro further summarized, a must-have record company faced with [redacted] 8/20/20 Tr. 3045:18-3046:4 (Shapiro).

[22] [redacted] /12/20 Tr. 1711:2-7 (Orszag).

[redacted]

4. Other Evidence Undermines Mr. Orszag's Claims of Countervailing Bargaining Power and Price Competition

157. As the preceding sections demonstrate, [redacted] or that the effects of labels' complementary oligopoly power have been eradicated. The very provisions of the [redacted] For instance, Dr. Peterson explained that [redacted]. 8/25/20 Tr. 3707:12-3708:2, 3711:10-23, 3725:3-3726:10 (Peterson). Moreover, as shown, [redacted] *Web IV*, 81 Fed. Reg. at 26373 ("Simply put, [redacted] would be a classic example of anticompetitive conduct.").

158. The complementary oligopoly power of the record companies is further evidenced by the fact [redacted] *See, e.g.*, TX 4021 at 3 [redacted] Shapiro WRT at 20 (citing TX 4021 as evidence of the importance of considering the

[redacted] TX 4022 at 1-2 [redacted]); 9/03/20 5717:7-14 (Harrison) [redacted]). Indeed, the effective per-play rate on [redacted] *See* Shapiro WRT at 22 & n.60 [redacted] 8/19/20 Tr. 2890:13-17 (Shapiro); 9/3/20 Tr. 5709:5-23 (Harrison).

159. The Majors' complementary oligopoly power is also borne out—not counterbalanced—by their alleged fierce "competition" for playlist positioning. As Professor Shapiro testified, it is "well understood from cartel theory that when companies engage in a cartel, [] they have very high margin on their sales," and will therefore engage in "non-price competition to try to get a bigger share [of the market] because it's so juicy." 8/19/20 Tr. 2879:2-6; Shapiro WRT at 5 n.9 (explaining how cartel members compete even harder on non-price dimensions when prices are maintained at supra-competitive levels to "gain more high-margin sales"); Shapiro WRT at 13 (same). Significantly, Ms. Fowler and Mr. Sherwood—the label witnesses SoundExchange selected specifically to offer testimony on the topic—both admitted [redacted]

[redacted] 9/02/20 Tr. 5435:8-16 (Fowler); 9/09/20 Tr. 5949:21-5950:23 (Sherwood). In other words, Ms. Fowler and Mr. Sherwood did not testify that the labels [redacted] 8/11/20 Tr. 1313:14-18 (Orszag).

160. Finally, the fact that [redacted] does not obviate the need for an effective competition adjustment. In an attempted "gotcha," Mr. Orszag argues that if Amazon Prime's per-play rate of $[redacted] reflects the lack of must-have power, and if Spotify and Pandora Premium pay $[redacted] per performances (*see* Shapiro WRT at 30 fig. 3), then the record companies must not be must-have for those services either—in which case there is no need to adjust the Spotify rates any further for effective competition (or to make an adjustment of only [redacted]). Orszag WRT ¶ 114. Again, Mr. Orszag is resorting to sleight-of-hand. Because he artificially excludes all the discounted plans from his calculations, the effective per-play rate of Spotify plans on which he actually relies for his benchmark is $[redacted] not $[redacted] Moreover, as explained at length above, he does not use the per-play rate at all, but rather alters the *Web IV* methodology by starting from Spotify's percent-of-revenue royalty. *See* 8/20/20 Tr. 3228:18-3230:3 (Shapiro) (explaining); 8/13/20 Tr. 1925:19-1927:2 (Orszag). Were Mr. Orszag actually working from a $[redacted] per performance benchmark and following the *Web IV* methodology, as does Professor Shapiro (whose competition adjustment drops his industry-wide interactive per-play benchmark from $[redacted] to $[redacted]), he might have a point—but he does not.

161. Additionally, Spotify pays $[redacted] solely for *one tier* of a comprehensive, multifaceted service—[redacted]. *See supra* ¶ 158. Given that dynamic, it is artificial and unpersuasive to suggest that the Spotify agreements, *taken as a whole*, reflect the forces of effective competition based merely on the coincidence that the effective rate for *one tier* happens to match the stated per-play rate paid by Amazon Prime for its entire service.

B. <u>Mr. Orszag's Benchmark for Subscription Webcasting Services is Flawed and Inconsistent with *Web IV*</u>

i. Mr. Orszag Departs from the Judges *Web IV* "Ratio Equivalency" Model

162. Mr. Orszag and Professor Shapiro both take subscription interactive services as their benchmark for subscription webcasters. But that is where the similarities end. As with his benchmarking model for advertising-supported webcasters, Mr. Orszag's first and foremost error is that he departs dramatically from the Judges' *Web IV* "ratio equivalency" model despite claiming to follow it. *See* Shapiro WRT at 24-27. As explained above, *supra* ¶ 21, the Judges' ratio equivalency model in *Web IV* relied on the following equation: [A]/[B] = [C]/[D], where [A] equaled the average retail subscription price for interactive services, [B] equaled the average per-performance royalty rate paid by subscription interactive services, [C] equaled the average retail subscription price for noninteractive services, and [D] equaled the per-performance royalty rate for noninteractive subscription services. *Web IV*, 81 Fed. Reg. at 26337-38; Shapiro WRT at 25. Following this equation, the Judges derived [D] (the target market rate) by adjusting the benchmark interactive per-play rate [B] downward by the retail price ratio of interactive and

noninteractive services ([A]/[C]), resulting in an interactivity adjustment of about [redacted]. Shapiro WRT at 25.

163. Mr. Orszag's putative "ratio equivalence" model, however, changes the benchmark royalty amount [B] from the contractual per-play rate used in *Web IV* to the total royalties paid by Spotify for its subscription service over a one-year period. *See* 8/13/20 Tr. 1929:22-1930:1 (Orszag); 1951:7-11 (Orszag) (acknowledging that the per-play rates paid by his benchmark services do not enter into his equations); 8/19/20 Tr. 2892:25-2893:7 (Shapiro); 8/13/20 Tr. 1951:7-11 (Orszag) (acknowledging that the per-play rates paid by his benchmark services do not enter into his equations). Similarly, Mr. Orszag does not use the average monthly subscription prices for [A] and [C] as was done in *Web IV*; instead he substitutes for [A] Spotify's total subscription revenue over a one-year period and for [C] the total subscription revenue earned by Pandora, iHeart, and Rhapsody for their mid-tier subscription services during the same one-year period. *See* 8/11/20 Tr. 1225:18-23 (Orszag); Orszag WDT ¶ 85 tbls.6-7. As a result, when Mr. Orszag solves for [D], the result is a total royalty amount for the three mid-tier subscription services, *not* a per-play royalty; Mr. Orszag derives a per-play statutory royalty rate only after dividing the total target royalties [D] by the total plays on the three mid-tier services. Orszag WDT ¶ 85 tbls.6-7.

164. In sum, rather than charging the target statutory services the same per-play rate as the benchmark services (adjusted for interactivity), as in *Web IV*, his model is set up to compute a rate whereby the target market services (based on their prior revenues and play counts) instead pay the same *percentage of revenue* as the benchmark services. 8/19/20 Tr. 2897:8-12 (Shapiro); Shapiro WRT at 25; Orszag WDT ¶ 81. As noted above, this approach is irreconcilable with the *Web IV* determination, which did not even *consider* the benchmark percent-of-revenue royalty.

See supra ¶ 24. As Professor Shapiro testified at the hearing, starting with the percentage-of-revenue figure from the benchmark market instead of the per-play rate, only to convert *back* to a per-play metric at the end, is completely unnecessary and "roundabout and unjustified," especially since the Judges are endeavoring to set a per-play rate in the target statutory market. 8/19/20 Tr. 2893:8-12; Shapiro WRT at 27-28.

165. Mr. Orszag's proposed rate for subscription webcasters is also illogical on its face. While he claims that the benchmark interactive rates have *dropped* significantly since *Web IV*—indeed that claim is the very basis for his argument that an effective competition adjustment is now unnecessary—the statutory rate he derives from the lower benchmark rates ($[redacted]) is nearly [redacted] than the statutory rate the Judges computed in *Web IV* ($0.0022) using the *same benchmark* and a rate-setting approach he claims to be following. This "anomalous" result is a red flag that Mr. Orszag's methodology has in fact departed significantly from *Web IV*, as Professor Shapiro explained. 8/19/20 Tr. 2896:6-2897:3 (Shapiro).[23]

ii. Mr. Orszag's Departure From the Judges' *Web IV* Approach Leads to Additional Errors in his Subscription Benchmarking Analysis

1. Mr. Orszag Does Not Adjust His Benchmark Rate to Account For the Interactive Functionality Available on Mid-Tier Subscription Services

166. To convert his percentage-of-revenue benchmark rate ([redacted]) into a per-play rate, Mr. Orszag relies on the revenues and plays of three "mid-tier" services (Pandora Plus, Rhapsody, and Slacker) as a proxy for the target market; each of those services offers some

[23] Mr. Orzag's stated rationale for his switch in approach is that while the per-play rate was the operative metric under which on-demand services paid at the time of *Web IV*, they now typically pay under the percentage-of-revenue prong of their agreements. *See* 8/11/20 Tr. 1233:24-1234:12 (Orszag); 8/13/20 Tr. 1930:8-15 (Orszag). Not only has he failed to support that contention with any evidence, but [redacted] *See* 9/2/20 Tr. 5152:2-5154:6 (Piibe).

degree of interactive functionality that extends beyond what is allowed under the statutory license. Shapiro WRT at 26-28; Orszag WDT ¶ 85; 8/12/20 Tr. 1565:9-17, 8/13/20 Tr. 1951:23-1952:9 (Orszag) (acknowledging the non-statutory functionality available on the mid-tier services). Yet Mr. Orszag applies *no adjustment* to account for the valuable interactive features offered by those services and not available under the statutory license. *See* 8/19/20 Tr. 2897:13-2898:5 (Shapiro). As Professor Shapiro explained, the mid-tier services' average revenue per subscriber likely exceeds what statutory subscription services could charge given the availability of non-statutory interactive features. Shapiro WRT at 28. As a result, Mr. Orszag "inflates the implied royalty payments (because the benchmark royalty percentage is applied to an inflated revenue base)" and therefore inflates his proposed per-play rate. *Id.*

167. Mr. Orszag himself concedes the added value of the interactive functionality offered by mid-tier subscription services, but he claims to lack an empirical basis for an appropriate adjustment. Orszag WDT ¶ 179. He further notes that Pandora One, Pandora's statutory precursor to the mid-tier Pandora Plus, had the same $4.99 list price as Pandora Plus notwithstanding its lesser functionality. *Id*. Accordingly, citing an absence of evidence that Pandora earned more revenue *per play* for Plus than it earned for Pandora One, which he asserts is (a) the relevant measure and (b) unavailable, Mr. Orszag claims that no further adjustment to his rates is necessary. *Id.* This explanation is insufficient for several reasons.

168. *First*, having altered the *Web IV* methodology to rely on the revenues and plays of the target services, and having opted to use mid-tier rather than statutory services in that model, the burden is on Mr. Orszag specifically to demonstrate *how,* if at all, Pandora Plus revenue and play counts varied from Pandora One. Throwing up his hands and saying no adjustment can be made is not a sufficient response to a critical deficiency of his own creation. *Second*, the

appropriate comparison in any event is not to a statutory product that Pandora offered four years ago, but to *current statutory services* that will actually be subject to the statutory rate; by Mr. Orszag's own admission, he conducted *no investigation* into the revenues earned by any existing subscription statutory services, made *no attempt* to identify the play counts on those existing services, and offers *no comparison* of the per-play revenue earned by any existing statutory services and his proxy mid-tier services. 8/13/20 Tr. 1952:13-1953:17, 1961:22-25, 1962:7-12 (Orszag); *see also id.* 1954:5-1955:12 (conceding that he has not identified the revenues earned by Sirius XM's subscription webcasting service or its total play count, despite it being the largest subscription statutory service).

169. *Third*, as discussed above, the similarity in price (or price per play) between Pandora Plus today and Pandora One four years ago does not mean that the added functionality on Plus had no value to Pandora or its subscribers: as Professor Shapiro testified, Pandora's decision to keep the price at $4.99 was attributable to other factors, including the well-understood "stickiness" of subscription list prices, the defection opportunities that arise from price changes, and Pandora's desire to attract more subscribers [redacted] by licensing new (and valuable) interactive features on Pandora Plus, rather than by lowering the list price on its statutory product. *See* SXM-PAN PFFCL ¶¶ 199-202; Shapiro WRT at 33-34.[24] As Professor Shapiro further noted, Pandora would not have paid

[24] Although revenue per play is the conversion metric used by Mr. Orszag to get from a percent-of-revenue royalty payment to a per-play payment for his proxy target services, *see* Orszag WDT ¶ 58 tbls. 6-7, he provides no actual economic rationale for *why* subscription services with the same revenue per play should necessarily pay the same per-play royalty rate even where the services have significant functionality differences (or, for that matter, why services with same functionality but different revenue per play should pay different per-play rates). That is just the mathematical implication of his model, which is set up to require a total payment equaling [redacted] of revenue. Because interactive subscriptions are sold for a monthly price that does not vary by play count, Mr. Orszag has demonstrated no relationship between subscription price and listening intensity that would justify pinning per-play royalty rates to per-play revenue.

a significant ([redacted]) premium over the per-performance statutory rate to license interactive features that provided no added value to its service. Shapiro WRT at 33-34.

170. As Professor Shapiro also demonstrated, that premium provides an exact measure of how much the extra rights licensed for Pandora Plus were worth and how to make an adjustment to account for them without needing to resort to service revenue: by comparing the effective per-performance royalty rate paid by mid-tier subscription services ($[redacted]) with the statutory rate ($.0023) and applying the resulting [redacted] adjustment factor. *See* Shapiro WRT at 33-34; 8/19/20 Tr. at 2898:6-17 (Shapiro). Mr. Orszag's benchmarking analysis is crippled by his failure to apply that "further interactivity adjustment," which the Judges recognized was necessary in *Web IV*, to account for the incremental value of the interactive features available on mid-tier services. *Web IV*, 81 Fed. Reg. at 26348; 8/19/20 Tr. 2832:19-2833:9 (Shapiro); Shapiro WRT at 33-34.

171. Because Mr. Orszag fails to take the necessary and additional step of adjusting for the interactivity licensed by his proxy mid-tier services, his approach—*i.e.*, applying his [redacted]% percentage-of-revenue rate for fully interactive services to the revenue earned by mid-tier services and then dividing by mid-tier plays—leads to another rather striking anomaly: his benchmark is, at the end of the day, nothing more than the effective per-play rate actually paid by the more interactive mid-tier subscription services. By Mr. Orszag's own admission, the mid-tier services already pay a percentage-of-revenue rate comparable to the Spotify rate (for its fully interactive subscription service) that Mr. Orszag uses in his models. 8/12/20 Tr. 1564:25-1565:4; Orszag WDT ¶¶ 84-85.[25] As a result, Mr. Orszag's benchmark rate ($[redacted]) for

[25] Pandora's license agreements with Majors, which are on the record, call for headline rates for Pandora Plus of [redacted] (TX 5013 at 32), [redacted] (TX 5012 at 10) [redacted] (TX 4031 at 11-14).

statutory services is nearly the same as (and indeed higher than) the mid-tier effective per-play rate ($[redacted]) calculated by Professor Shapiro. *See* Shapiro SCWDT 37-39 & tbl. 9; *see also* 8/13/20 Tr. 1958:24-1959:24 (Orszag) (conceding that if one assumes (accurately) that the percentage-of-revenue rates paid by the mid-tier and fully interactive services are the same, then his benchmark rate is what the mid-tier services "currently pay today").

2. Mr. Orszag's New Methodology Leads to Other Anomalous and Indefensible Results

172. Mr. Orszag's methodology, as described above, consists of applying the [redacted]% percentage-of-revenue rate paid by the fully interactive services to the gross revenues earned by his proxy mid-tier services, and then dividing that number by the total plays on the mid-tier services. Orszag WDT ¶ 85 & tbls.6-7. The expressly stated goal is that the target market services pay the same percentage-of-revenue royalty as the benchmark interactive rate. *Id.* As Professor Shapiro explained, however, because the model is built on the revenues and plays of the target-market services, the results of the model "will vary widely based on divergences in the number of performances and the proxy services used for such play counts": *e.g.*, the lower the mid-tier play count used in Mr. Orszag's conversion, the *higher* the proposed per-play rate (and vice versa). Shapiro WRT at 28; *see also* 8/13/20 Tr. 1950:22-1951:2 (Orszag) (acknowledging that his proposed per-play rate would have been lower if there had been more performances on Pandora Plus).

173. One important implication of Mr. Orszag's new approach is that, unlike in *Web IV*, the per-performance rate arising from his model (and proposed as the statutory rate) will not be the same as the per-performance rate in the benchmark interactive services market (adjusted for interactivity) unless the benchmark and proxy mid-tier services have identical per-subscriber play counts. Shapiro WRT at 26. But they do not, as Professor Shapiro has illustrated. Instead,

the available play count data shows a greater number of performances on fully interactive services, which implies a proposed rate for the target services [redacted]% larger than the rate that would be derived from the interactive service per-performance royalty rate, as in *Web IV*. 8/19/20 Tr. 2895:19-25 (Shapiro); Shapiro WRT at 26-27 & fig.2.

174. Another (and perhaps more damning) implication of Mr. Orszag's failure to adhere to the Judges' *Web IV* methodology is that no subscription statutory service will actually pay the same [redacted]% effective percentage-of-revenue rate as Mr. Orszag's starting-point interactive services (notwithstanding that assertion being the foundational premise of his new approach and the purported reason for his change in methodology) unless that statutory service has *precisely the same ratio of revenues to per-subscriber plays as the mid-tier services* Mr. Orszag takes as his proxy. 8/19/20 Tr. 2893:19-23, 2894:6-2895:16 (Shapiro). As described above, however, Mr. Orszag made absolutely no attempt to identify the revenue and play count information needed to calculate that ratio for any existing statutory services, and he admitted at the hearing that he has not analyzed whether *any* existing statutory subscription service will actually pay his [redacted]% benchmark rate. 8/13/20 1963:8-13 (Orszag). As Professor Shapiro explained, that is highly unlikely to be the case because, among other reasons, the leading subscription services offer music streaming in conjunction with other non-music offerings (and, in the case of Sirius XM, its satellite service), making it "extremely difficult" to even measure the share of revenue attributable to music streaming only, much less benchmark a rate to it. Shapiro WRT at 28.

175. A few simple examples using the data in Table 7 in Mr. Orszag's written direct testimony (*see* TX 4114) demonstrate how unlikely it is that any subscription statutory webcaster will actually pay Mr. Orszag's benchmark rate. At Mr. Orszag's proposed $[redacted] per-play rate,

a statutory service with the typical average monthly revenue per subscriber of $4.99 would need to average [redacted] monthly plays per subscriber to actually pay a [redacted]% effective percentage-of-revenue rate.[26] In fact, *only* a service with those *exact* revenue and play figures will pay Mr. Orszag's benchmark rate, unless it offers a price discount that precisely matched by a proportionate drop in performances (*e.g.*, a statutory service that charges $2.49 and averages [redacted] plays per user).[27] But there is no reason to assume that subscribers who pay less for their subscription will necessarily listen less (and certainly not in exact proportion to the price discount); more likely is that a service offering a discounted price will have somewhat comparable average plays per subscriber. If a statutory service charged, say, $3.00 per month, but had the same [redacted] average monthly per-subscriber plays as the sample service, it would pay an effective percentage-of-revenue rate of [redacted]%.[28]

176. These examples underscore the futility inherent in Mr. Orszag's attempt to set a per-play royalty that equalizes percent-of-revenue royalties: by his own admission, he did not actually analyze the revenues, (*see* 8/13/20 Tr. 1952:19-24 (Orszag)), or play counts (*see id.* 1952:25-1953:5,1961:22-25), on any subscription statutory services to see what they would actually pay under his model or how it compares to his benchmark or mid-tier proxy services, (*id.* 1953: 6-17; 1962: 7-12). This provides yet another reason to simply start with a per-performance rate and adjust as necessary, rather than using a percentage-of-revenue rate that, unless the stars align, will almost assuredly *not* be what the statutory services pay. Shapiro WRT at 28.

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[26] *i.e.*, [redacted].

[27] *i.e.*, [redacted].

[28] *i.e.*, [redacted].

3. Mr. Orszag Fails to Adjust for Effective Competition

177. Mr. Orszag also fails to adjust his benchmark rate for subscription webcasting services to account for the lack of effective competition in his benchmark market. In *Web IV* the Judges applied a 12% effective competition adjustment to their benchmark subscription interactive rate. Shapiro WRT at 30-32. For the reasons described in Section II(A)(ii)(1), *supra*, such an adjustment ([redacted] as calculated by Professor Shapiro) remains warranted given the sustained complementary oligopoly power and must-have status of the Majors in the market for licensing recorded music to interactive services. *Id.*; *see also supra* ¶¶ 7-18, 57-62.

4. Mr. Orszag Fails to Account for Revenues Earned From Discounted Plans

178. Last, Mr. Orszag errs in calculating his benchmark percentage-of-revenue royalty rate by using revenue and royalty information from full-price interactive subscriptions only, and excluding discounted plans from his analysis. Shapiro WRT at 29. As detailed above, where there is price discrimination in the benchmark market (in the form of discounted subscription offerings), and the statutory rate will apply to *all* subscribers in the target market regardless of their chosen plan, the appropriate benchmark rate is the effective per-play rate paid by the benchmark services across *all* subscribers, not just the more expensive, cherry-picked plans on which Mr. Orszag relies. *See id.* (because the per-performance statutory will be applied to all subscribers in the target market, "for proper comparability, the benchmark rate should be calculated using all subscribers in the *benchmark* market."); 8/20/20 Tr. 2958:22-2959:6 (Shapiro) (explaining why he did account for discounted plans in his own interactivity adjustment); SXM-PAN PFFCL ¶ 185.

179. Mr. Orszag has offered no sound basis for excluding discounted plans from his calculations save for the fact that Pandora Plus allegedly offers less discounting than Spotify—a

red herring that was addressed and dispatched in Sirius XM and Pandora's brief. *See* SXM-PAN PFFCL ¶ 186. Had Mr. Orszag looked at *statutory* subscription webcasting services (and Sirius XM in particular), he would have seen that they offer a wide array of discounted subscription plans, undercutting Mr. Orszag's contention that the lack of downstream discounting justifies his approach. 8/19/20 Tr. 2956:21-2958:7 (Shapiro) (noting that Sirius XM's discounted plans remain informative despite being bundled packages). As Professor Shapiro demonstrated, properly including all subscription Spotify plans lowers the per-play royalty from $[redacted] to $[redacted], a [redacted]% decrease. Shapiro WRT at 29-30 & fig.3. As he also demonstrated, even if one adopts Mr. Orszag's (defective) benchmarking methodology, applying appropriate adjustments for limited interactivity and effective competition would lower Mr. Orszag's proposed rate for subscription webcasting services from $[redacted] per performance to [$[redacted]] per performance. *See* Shapiro WRT at 35-36 & fig.4.[29]

C. Professor Willig's Bargaining Model Relies on Unfounded Assumptions, Inappropriate Methodologies, and Flawed Inputs to Generate Vastly Inflated Rates

180. SoundExchange offers Professor Willig's theoretical models in support of its proposed rate.[30] His "primary model" is a Shapley analysis modeling a marketplace with three must-have major record labels. *See* 8/9/20 Tr. 1068:17-19 (Willig). In that respect, it resembles the real world market that spawned Orszag's subscription interactive benchmarks. *See supra* ¶¶ 162-65. And, like Mr. Orszag, he fails to make any adjustment for effective competition. As a result, it is unsurprising that his results resemble and exceed the outcome of Orszag's benchmark

[29] As Professor Shapiro testified at the hearing, the skips adjustment identified in his written rebuttal testimony need not be applied given Mr. Orszag's percentage-of-revenue approach. 8/20/20 Tr. 3026:3-18 (Shapiro).

[30] Professor Willig explicitly stated that "[a]nalysis of [noncommercial] rates is beyond the scope of [his] assignment and testimony." Willig WDT ¶ 9 & n.9; 8/10/20 Tr. 1086:2-4 (Willig). He did not "analyze[] data regarding non-commercial services in the analyses that [he] presented" and did "not offer[] any opinions about rates for non-commercial webcasting." *Id.* at 1085:17-1086:1.

analysis. *See* 8/24/20 Tr. 3414:14-3415:10 (Leonard) (explaining how benchmarking and opportunity cost analyses are "very different" and that you would not expect "perfect matching" in the results).

181. Notwithstanding that the Judges, Participants, and expert economists in this proceeding all agree that the rates established in this proceeding should be equivalent to what a willing buyer and a willing seller would negotiate in a hypothetical market that is effectively competitive, *see supra* ¶¶ 1-6, Professor Willig's theoretical analysis is infected with the effects of complementary oligopoly power at every level. His Shapley analysis models the major record companies as a complementary oligopoly—their must-have status is assumed. *See* 8/5/20 Tr. 342:10-14 (Willig); *see also infra* ¶¶ 185-86. In fact, if Professor Willig had modeled a single monopolist rather than three "must have" record companies, the results of his model would have been lower. 8/5/20 Tr. 486:20-488:9 (Willig); 8/18/20 Tr. 2642:16-2643:22 (Shapiro).

182. Further, and in addition to his "must have" assumption, Professor Willig's Shapley analysis hinges on an unadjusted opportunity cost generated from a separate analysis that presumes must-have status for *all* sound recording licensors by awarding any label that does not license the streaming service in his model a 100% share of the plays diverted to other royalty bearing forms of listening (with the label's share of diverted plays often referred to as the "retention" ratio in Professor Willig's analysis). 8/5/20 Tr. 342:10-14 (Willig) 345:17-346:15. And that opportunity-cost analysis, moreover, takes as a significant input unadjusted rates from the market for licensing interactive services, which reflect labels' complementary oligopoly power. 8/6/20 Tr. 488:12-489:18 (Willig). Each of these choices by Willig takes his result further off course from arriving at an effectively competitive royalty rate.

183. The complementary oligopoly power problem inherent in Professor Willig's Shapley model is not self-correcting, as Professor Willig claims. *See* 8/6/20 Tr. 489:19-491:20; 8/25/20 3861:8-3862:2. As Professor Shapiro put it, in what he described as "a fundamental point and maybe the single most important point" he made during the economic rebuttal phase, "Shapley Value in the context here absolutely does not eliminate concerns about monopoly power or complementary oligopoly power. It does not do it." 8/26/20 Tr. 3922:3-8. Professor Shapiro proceeded to explain at length why Professor Willig's claim that changing the order of arrival solves for market power is "nonsense" (and how Professor Willig's Shapley model generates rates that are not only well above an effectively competitive rate but even above the monopoly rate). *Id.* 3921:21-3929:14; *see also* 8/24/20 Tr. 3443:4-3444:15 (Leonard) (noting that the Shapley values would go down if the three must-have labels in Willig's model were combined into a monopoly).

184. Nor is it resolved by Willig's glib "fork in the road" analogy. *See* Willig WRT ¶ 118. During the hearing, Dr. Leonard explained why an opportunity-cost analysis like the one performed by Willig separately "builds in complementary oligopoly power" and "[s]o . . . if we want to build in steering to reflect effective competition, so the number we get out of it is consistent with effective competition, then we really do need to make some kind of adjustment to the number that we get out." 8/24/20 Tr. 3408:19-3410:5; *see also id.* at 3411:2-3413:9 (explaining how Willig's "fork in the road" testimony does not address complementary oligopoly problems with opportunity-cost analyses under the "no license" assumption). Willig makes no such adjustment and simply imports his opportunity-cost result into his model, thus driving up the generated rate. If there was a fork in the road, Willig chose the path away from effective competition and towards oligopoly rates.

i. Professor Willig Incorrectly Assumes the Majors Are "Must-Have" for Noninteractive Webcasters

185. The "primary driver" of the difference in rates between Professor Willig's bargaining model and Professor Shapiro's is "the must-have assumption that Professor Willig makes." 8/26/20 Tr. 3938:3-10 (Shapiro). In Professor Willig's analysis, "each of the three major record companies is taken to be a 'must-have,' meaning that the sound recording collection of each is necessary for a noninteractive distributor to operate." Willig CWDT ¶ 31. If the circumstances are such that a distributor is without access to the repertoire of a "must-have" record company, the distributor would no longer have a "commercially viable" service and would shut down—a dynamic that confers extraordinary market power on the record company. Shapiro SCWDT at 13 nn.13, 18; Shapiro WRT at 55-56; 8/18/20 Tr. 2639:19-2640:4 (Shapiro).

186. Professor Willig's assumption that each major record company is "must-have" for noninteractive webcasting is contrary to the evidentiary record, *see infra* ¶¶ 187-90, and because his incorporation of that unfounded assumption into his bargaining model bakes in complementary oligopoly power for the major record labels, his model does not yield rates that comport with the statutory rate-setting standard. Shapiro WRT at 55-58; *see also* 8/24/20 Tr. 3400:17-3401:1 (Leonard); 8/25/20 Tr. 3663:10-3664:7 (Peterson). Moreover, *even if* the evidentiary record did support the notion that the major record companies are must-have for webcasting—and it plainly does not—the Judges would need to adjust for this obvious evidence of market power in appropriately setting the statutory rate. *See* Shapiro WRT at 55-58; *see also* Leonard CWRT ¶ 36 ("Shapley Values are not meant to mimic a WBWS outcome and, indeed, a WBWS outcome may well differ from the outcome implied by Shapley Values, depending on the institutional structure."). Professor Willig failed, however—in both his Shapley model and his Nash-in-Nash model—to make any downward adjustment to his royalty rates to reflect

effective competition, or offer any means for making such an adjustment. *See supra* ¶¶ 182-83, Shapiro WRT at 56-58.

1. Professor Willig's Unfounded Must-Have Assumption Causes His Bargaining Model To Generate Significantly Higher Rates than Would Be Found in the Absence of That Assumption

187. Professor Willig's must-have assumption "permeates the entire Willig CWDT." Shapiro WRT at 55; *see also* Willig CWDT ¶ 31 ("Each of the three major record companies is taken to be a 'must-have' . . . ."); 8/10/20 Tr. 894:3-13 (Willig) (acknowledging that both his Nash-and-Nash and Shapley models assume "[t]hree must-have majors and one must-have label representing all of the Indies").

188. The effect of this assumption on hypothetical negotiations between the must-have label and the service is significant. Secure in the knowledge that the service's very survival depends on reaching a license agreement, the label enjoys "very high fall-back values" in the negotiation. 8/25/20 Tr. 3730:18-3731:7 (Peterson). As Dr. Peterson explained: the "labels never lose. They never lose a play," because if they refuse to license the service, they can "recover 100 percent of their plays" when the service shuts down and listeners go elsewhere. *Id.* 3731:8-17 (Peterson); *see also* Shapiro SCWDT at 16, 18.

189. In this counter-factual scenario, the opportunity cost to the label of agreeing to license the service is "very high," 8/25/20 Tr. 3738:15-3739:3 (Peterson), and, accordingly, so are the per-performance royalty rates generated by Professor Willig's bargaining model. Indeed, as Professor Shapiro demonstrated, the must-have assumption alone has huge implications for SoundExchange's proposed rates: even without making any other corrections, simply dropping this assumption from Professor Willig's Shapley Value analysis reduces the per-performance royalty rate generated by his model nearly 20% based on the amount of lost listening hours found

in Pandora's experiments. The ad-supported royalty rate would fall from $[redacted] to $[redacted], while the subscription royalty rate would fall from $[redacted] to $[redacted]. Shapiro WRT at 63, fig.11; 8/19/20 Tr. 2821:21-2822:19 (Shapiro).[31]

190. Likewise, dropping the must-have assumption in Professor Willig's Nash-in-Nash model also dramatically reduces the per-performance royalty rate generated by that model. *See* Shapiro WRT at 64-66; 8/19/20 Tr. 2812:10-2814:15 (Shapiro). Specifically, using the amount of lost listening indicated by Pandora's Label Suppression Experiments (*see infra* ¶¶ 195-98), dropping the must-have assumption would cause Professor Willig's ad-supported rate to fall even farther from [redacted] to [redacted], while the subscription rate would fall steeply from [redacted] to [redacted]. Shapiro WRT at 63, fig.11; 8/19/20 Tr. 2821:21-2822:19 (Shapiro). Even if one disregards the Label Suppression Experiments and instead assumes that the service's loss of listening hours equals the label's share of plays on the service—*i.e.*, 100% of that label's plays—dropping the must-have assumption would still reduce Professor Willig's ad-supported and subscription royalty rates by approximately [redacted]% and [redacted]%, respectively. *See* Shapiro WRT at 46, 64-65 & fig.13; 8/19/20 Tr. 2812:10-2814:15 (Shapiro).

2. Professor Willig's Assumption that the Majors Are Must-Have for Noninteractive Webcasting Is Factually Wrong

191. Professor Willig's unfounded assumption that each of the major record companies is a "must-have" for statutory webcasters is refuted by the evidentiary record. *See* Peterson AWRT ¶¶ 97-98; 9/1/20 Tr. 4878:5-4879:18 (Diab); Reiley CWDT ¶¶ 11, 13; Reiley WRT ¶¶ 2-4; 9/1/20 Tr. 4906:18-4907:11, 4912:21-4913:2 (Reiley).

[31] Both the high and low figures here (with and without the must-have assumption) include a correction for Professor Willig's unsupportable assumption that an independent label would retain 100% of plays in a blackout. *See infra* ¶¶ 232-238.

192. [redacted]. Peterson AWRT ¶¶ 97-98; 9/1/20 Tr. 4878:5-4879:18 ([redacted]). [redacted]. 9/1/20 Tr. 4878:5-4879:18. Due to these factors, [redacted].” *Id*.

193. [redacted]. 9/1/20 Tr. at 4851:8-4852:5.

194. [redacted]. TX 1029*; TX 1030*. [redacted]

[redacted]. TX 1029* at 16. [redacted]. *Id.* at 11.

195. Additionally, as described more fully in Pandora's separate proposed findings, the results of the Label Suppression Experiments ("LSEs"), conducted at the request of Professor Shapiro and under the supervision of Pandora's Distinguished Scientist, Dr. David Reiley, show that no individual record company—no matter how large—is even close to a must-have for Pandora. *See* SXM/PAN PFFCL ¶¶ 64-85; Reiley CWDT ¶¶ 11, 13; Reiley WRT ¶¶ 2-4; 9/1/20 Tr. 4906:18-4907:11 (Reiley); *id.* at 4912:21-4913:2.

196. The LSEs measured the actual effect on listenership and a variety of other metrics of suppressing plays from a particular record company on Pandora's noninteractive service. The LSEs demonstrated that, even after six months, there was no meaningful decline in listenership for any of the suppression treatment groups. Reiley CWDT ¶¶ 21-24; Reiley WRT ¶ 13.

197. Dr. Reiley testified that, based on the results of the LSEs, even a conservative estimate of the long-term effects of a major-label blackout would be nowhere near the level of potential listening loss that would occur if any of the major labels were in fact must-haves, as Professor Willig wrongly assumes. Reiley WRT ¶ 31; 9/1/20 Tr. 4915:20-4916:5 (Reiley).

198. Neither Professor Willig nor any other SoundExchange witness has offered sufficient affirmative evidence to rebut the results of the LSEs. *See* 8/10/20 Tr. 1080:5-22 (Willig); SXM/PAN PFFCL ¶¶ 79-98.

3. Professor Willig's Must-Have Assumption Has No Empirical Support

199. Professor Willig's decision that each of the Majors should be "taken to be a 'must-have'" relied entirely on a single line from the *Web IV* determination. Willig CWDT ¶ 31 (citing *Web IV*, 81 Fed. Reg. at 26373). By his own admission, beyond that lone citation, Professor Willig had no support for this critically important assumption; he relied entirely on that single comment made by the Judges in *Web IV*. He built his model on "what I thought to be a consensus that the majors were, indeed, must-haves. And so I really didn't go further into challenging or supporting that presumption." 8/10/20 Tr. 1087:23-1088:1 (Willig). Professor Willig did not perform any independent investigation or empirical study. *Id.* 1089:8-14 (Willig).

200. The reality is that the issue of whether the Majors were "must haves" for statutory services was not a central focus of evidence in *Web IV*—certainly as that issue has been in this case—much less a "consensus" position. *See Web IV*, 81 Fed. Reg. at 26364 (noting only that the Services' economic experts had not expressly rejected the possibility that the Majors were "must haves" for noninteractive services). There is no justification for continuing to rely on a five-year-old assumption that was not even proven or supported with evidence at the time it was made. Professor Willig nonetheless "didn't feel the need or even the impulse to provide any further support" for his must-have assumption. 8/10/20 Tr. 1088:3-5 (Willig)

4. The Evidence that SoundExchange Belatedly Proffered To Rationalize Professor Willig's Must-Have Assumption is Inapposite and Should Be Accorded No Weight

201. Though Professor Willig claimed the "character of [his] work changed a great deal" at the rebuttal phase when he was confronted with the results of Pandora's experiments, 8/10/20 Tr. 1088:6-11 (Willig), his written rebuttal testimony fails to cure the lack of support for his must-have assumption, and "[f]inally" winds up at the same place as his direct testimony.

Willig WRT ¶ 42. Grasping for factual support for his assertion that there is a "widespread understanding," that each of the major record companies is a "must-have" for a noninteractive webcaster in the face of the substantial evidence to the contrary, Professor Willig points to a few sources of evidence in this proceeding that he believes are useful: certain service documents, certain remarks by the service-side economists, and upstream competition between the Majors for artists. Willig WRT ¶¶ 36-37, 40-42. None of the evidence he cites provides credible support for his must-have assumption. As shown below, some of it focuses on the wrong market entirely—the licensing market for *interactive* services—and only serves to underscore the undisputed point that major records companies are must-haves for interactive services. The remainder simply evidences that webcasters need access to a sizable repertory in order to operate a successful service, not that they need access to the catalog of any particular record company.

202. ***The Google and Pandora Documents***. Professor Willig claims that a handful of documents from Google and Pandora support his must-have assumption. *See* Willig WRT ¶¶ 36 & n.66 (citing TXs 5051, 5053, 5152*), 37 & nn.67-68 (citing TXs 5153, 5160). Professor Willig is wrong.

203. Professor Willig first identifies Trial Exhibit 5053, a Google document discussing, starting on page 6, [redacted] TX 5053 at 6. But the page that Professor Willig cites [redacted]. *See* Willig WRT ¶ 36 n.66 (citing Bates 36885, appearing on TX 5053 at 13). It is a truism that a music streaming service needs some quantum of content in order to operate. The question is just how *much* content is needed for the service to survive commercially—in other words, what is [redacted] *See* TX 5053 at 13 (discussing [redacted] (emphasis added)). The document makes

clear that, at a minimum, [redacted] Indeed, the document explicitly states regarding the status of negotiations with [redacted] TX 5053 at 13. Of course, the record makes emphatically clear that [redacted] *See supra* ¶¶ 192-94.

204. What is more, the document indicates that Google [redacted] According to Professor Willig, the portion of the document stating that [redacted] 8/5/20 Tr. 449:17-22 (Willig). In no uncertain terms, therefore, this document shows Google [redacted]

205. Professor Willig still claims the document is not inconsistent with his assumption because he believes Google's [redacted] 8/5/20 Tr. 450:1-14 (Willig). But Professor Willig offered no support or explanation for this opinion, including no explanation of how the [redacted]. *Id.* Moreover, his characterization of Google's [redacted] is unsupported by any Google witness with personal knowledge of the service, its planned uses, or its potential future applications. More to the point, however, this attempt to

slice the noninteractive streaming market into [redacted] contradicts Professor Willig's own Written Rebuttal Testimony, where he states, [redacted] Willig WRT ¶ 42; *cf.* Leonard CWRT ¶¶ 73-74 (discussing how the "functionalities most sought after by [interactive services] users can be achieved only if the service has access to the catalogs of all the major labels"). In short, the document regarding Google's [redacted]

206. Professor Willig next identifies a pair of Google documents discussing Google's [redacted] Willig WRT ¶36 n.66 (citing TXs 5051, 5152). Specifically, he points to statements that "[redacted]. Willig WRT ¶ 36 & n.66 (emphasis added);[32] *see also* 8/5/20 Tr. 448:25-450:14, 455:9-456:2 (Willig). However, much like the [redacted] TX 5051 at 11. There is no indication in the document that [redacted].

[32] Footnote 66 of Professor Willig's rebuttal testimony is appended to a sentence about [redacted] Willig WRT ¶ 36. Yet of the three documents he cites in footnote 66 (TXs 5051, 5053, and 5152*), only one of them is in fact discussing the [redacted] *See* TX 5053. The other exhibits are about different services – Trial Exhibit 5051 deals with [redacted] and Trial Exhibit 5152* addresses [redacted]. *See* TX 5051 at 1 [redacted] TX 5152* at 6-7 ([redacted]).

207. More fundamentally, Trial Exhibits 5051 and 5152* cannot support Professor Willig's assumption that the Majors are must-haves for a *statutory* webcaster because they both [redacted]. The very documents Professor Willig cited describe [redacted]. TX 5051 at 14; 8/10/20 Tr. 947:17-25 (Willig) ("Q: [redacted] . . . those are all interactive services, right? A: I think that's right."). For these reasons, Professor Willig had no basis to use documents concerning the [redacted] to support his "must have" assumption for noninteractive statutory services.

208. Professor Willig then points to documents from Pandora that describe, [redacted] Willig WRT ¶ 37 (citing TX 5153 at 56). But the observation that [redacted] is disconnected from the question of whether any particular record company is a must-have. As a statutory service, Pandora has access to all of the recordings offered by each of the Majors; [redacted] is simply a different issue that is untethered from the question of whether Pandora needs a license from any particular record company. On its ad-supported noninteractive service, [redacted]. As its Chief Product Officer, Chris Phillips, testified, [redacted]. 8/31/20 Tr. 4658:10-4660:20 (Phillips). Given [redacted]

[redacted] 8/10/20 Tr. 961:7-11 (Willig). It would simply mean that Pandora would need to [redacted]

209. ***Footnotes in Service Economists' Written Testimonies.*** Professor Willig also claims that his must-have assumption is "consistent with admissions from witnesses for the services," citing to certain footnotes in the reports of Drs. Leonard and Peterson. Willig WRT ¶ 42 & nn.84-85. But Professor Willig misapprehends those footnotes. Read in their entirety, they are consistent *not* with Professor Willig's position but with Professor Shapiro's: the Majors are *not* must-have for a noninteractive webcaster.

210. From Dr. Leonard's Corrected Written Direct Testimony, Professor Willig selectively quotes the following: "the major labels are must-have for simulcasters." Willig WRT ¶ 42; 8/5/20 Tr. 436:15-19 (Willig). Dr. Leonard in fact wrote:

> Given that simulcast is a small portion of a radio station's business and the radio station has decreased ability to steer on the simulcast for the reasons discussed elsewhere in this report, the major labels are "must haves" for simulcasters. This is true, even assuming for the sake of argument, that they are not "must haves" for other non-interactive services. As discussed above, being "must haves" confers complementary oligopoly power on the major labels.

Leonard CWDT ¶ 72 n.99.

211. The full quote provides two necessary clarifications. First, what holds true for simulcasters does *not* necessarily hold "for other non-interactive services." *Id.* Indeed, the quote from *Web IV* upon which Professor Willig relies for his assumption comes from a discussion of the Majors responding to "a threat of steering"—the concepts are inextricably linked. *Web IV*, 81 Fed. Reg. at 26373. Second, Dr. Leonard is not opining on whether the major labels are must haves for radio broadcasts. *See* 8/24/20 Tr. at 3569:21-3572:8 (Leonard). Rather, he is referring

to the fact that, once the programming of the radio broadcast is determined, the ability to simulcast that exact programming requires the rights of any sound recording that might be included in the underlying broadcast. *See id.* at 3570:15-3571:9 (contrasting "just looking at simulcast" in a vacuum with "looking . . . more broadly" at the level of a negotiation between a radio station and a major label). Finally, Professor Willig omitted Dr. Leonard's correct assessment that must-have status confers complementary oligopoly power, which must be addressed in setting the statutory rate. *See infra* ¶ 221.

212. Professor Willig also quotes Dr. Peterson's statement that "at least the major labels are 'must haves' *for the on-demand services*." Willig WRT ¶ 42 & n.85 (quoting Peterson AWDT ¶ 15(b)). But there is no dispute that the Majors are must-haves for *on-demand* services; indeed, as Dr. Peterson opines in that same paragraph, this fact requires a competition adjustment to correct for the Majors' complementary oligopoly power in the interactive market. Peterson AWDT ¶ 15(b).

213. Last, at the hearing, Professor Willig selectively and misleadingly quoted a footnote in Dr. Peterson's Amended Written Rebuttal Testimony. 8/5/20 Tr. 436:25-437:18 (Willig) (quoting Peterson WRT ¶ 114 n.118). Even setting aside the full context of the quote, the portions that Professor Willig recited do not support his assumption that the Majors are must-haves. Dr. Peterson stated: "Presumably some group of indies together with a major label may be able to shut down a non-interactive service. . . . I assume in the discussion that follows that a streaming service that fails to license a major label and the consolidated independent labels will not operate." *Id.* Not only is Dr. Peterson merely "presuming" something that "may" result in a noninteractive webcaster shutting down, but even the hypothetical he posits still requires a major

plus every single independent label—hardly the same as Professor Willig's baseless assumption that a single major by itself could achieve the same result.

214. More egregiously, Professor Willig again omitted the context: Dr. Peterson's footnote actually came from a paragraph *stating that Professor Willig's must-have assumption is "erroneous."* Peterson WRT ¶ 114. Furthermore, the footnote in its entirety makes clear that Dr. Peterson was criticizing Professor Willig's decision to group every independent label into a single consolidated entity in his Shapley model:

> The question of whether a major label and the consolidated independent labels in Professor Willig's model can shut down the non-interactive service is unaddressed by Professor Willig's analysis. Presumably some group of indies together with a major label may be able to shut down non-interactive service. If this is the case, the correct modeling of this question would require allowing the independent labels to enter the Shapley Value calculation individually rather than as a consolidated entity. With no evidence on this point, I assume in the discussion that follows that a streaming service that fails to license a major label and the consolidated independent labels will not operate.

Peterson WRT ¶ 114 n.118; *see* 8/5/20 Tr. 437:10-18 (Willig). And as to whether the combination of a major *and* the independents could shut down a noninteractive service, Dr. Peterson noted there was "no evidence on this point." Peterson AWRT ¶ 114 n.118.

215. [redacted] ***Services.*** Professor Willig next turns to documents from record company files that show [redacted] But again, this point is undisputed and is a point of distinction between the two licensing markets. In his Written Rebuttal Testimony, Professor Willig posits that popular tracks, or "hits," somehow confer must-have status on the Majors. Willig WRT ¶ 40-41. But the documents he cites all [redacted] *See* Willig WRT ¶ 40 n.75 (noting that [redacted]

[redacted]); 8/31/20 Tr. 954:16-21 ("Q. But the platforms they're talking about are [redacted], correct? A. Yes. Q. And [redacted] are on-demand services, right? A. Yes."). The documents also discuss [redacted]. *See* Willig WRT ¶ 40 n.76 [redacted]; TX 5165 at 3-9 ([redacted]; 8/10/20 Tr. 956:9-11 (Willig) ("Q. It was a survey [redacted] Indeed, on cross-examination, Professor Willig admitted that the [redacted] *See* 8/5/20 Tr. 445:19-23 (Willig); 8/10/20 Tr. 958:1-3 (Willig).

216. Professor Shapiro explained that Professor Willig's discussion of "hits" was inapposite to the issue at hand: whether Majors are a must-have supplier to *noninteractive* webcasters. When asked whether competition among Majors to attract artists who may in turn produce "hits" can create effective competition in the market for licensed music, Professor Shapiro dismissed the argument as a distraction: "No. . . . It just seemed like he was distracting our attention to this completely separate upstream market as between the record companies and the artists. That's not the market we're looking at here." 8/18/20 Tr. 2636:10-20 (Shapiro).

ii. Professor Willig's Use of Shapley Values Is Inappropriate

1. The Nash-In-Nash Bargaining Model is Superior to the Shapley Value Model in These Proceedings

217. As Professor Shapiro explained, if the Judges are to apply economic model-making in lieu of a benchmark approach in this proceeding, the Nash-in-Nash bargaining model

is superior to the Shapley Value model put forth by Professor Willig for generating proposed statutory rates under the willing buyer/willing seller standard. Shapiro WRT at 59; 8/19/20 Tr. 2740:22- 2742:7 (Shapiro). Professor Shapiro and Professor Willig agree that the Nash-in-Nash bargaining model is sound and well-suited for this proceeding, and both used the Nash-in-Nash model in their respective CWDTs. Shapiro SCWDT at 26-28; *id.* at App. F; Willig CWDT ¶¶ 61-67; *see also* Shapiro WRT at 59.

218. Shapley Value is a theoretical method based on *cooperative* game theory and, although useful for modeling returns to coalitions such as modeling the political power of individual political parties, is an inappropriate methodology in this setting for determining the outcome of *bilateral* negotiations between a willing buyer and willing seller. Shapiro WRT at 7, 59; Leonard CWRT ¶ 36; Peterson WRT ¶ 84; 8/19/20 Tr. 2817:4- 2818:10 (Shapiro).

219. Specifically, the Shapley Value model is inappropriate here because each firm's Shapley Value is determined by the incremental value that firm brings to all possible coalitions, including many coalitions that are not directly relevant to the bilateral bargaining at issue in this proceeding. Shapiro WRT at 59. For example, the value that [redacted] contributes to Pandora's service if Pandora is not able to offer music from [redacted] is not directly relevant to negotiations between [redacted] in a setting where it is fully expected that Pandora will sign licenses will [redacted]. *Id.* Furthermore, the Shapley Value improperly assumes that players in the model, such as groups of record labels, are free to collude to maximize payoffs to their coalition. Peterson WRT ¶ 84.

220. Professor Willig has not established (and cannot establish) that the Shapley Value accurately captures the outcome of the relevant bilateral negotiations between one record company and one statutory webcaster. Shapiro WRT at 59; 8/19/20 Tr. 2817:4- 2818:10

(Shapiro). None of the justifications Professor Willig offers for using the Shapley Value model hold merit. Shapiro WRT at 60.

221. First, Professor Willig relies on the *Phonorecords III* decision, where the Judges credited a specific implementation of a Shapley Value analysis as one way of addressing concerns about complementary oligopoly power. Willig CWDT ¶ 14 (citing *Phono III*). However, the Shapley Value analysis addressed in *Phonorecords III* was used for a different purpose, treating sound recording copyright holders as a single entity and explicitly avoiding complementary oligopoly power among separate copyright holders for each set of rights. Shapiro WRT at 60. Because Professor Willig's Shapley Value model fails to remove complementary oligopoly power among the major record companies, it gives additional returns to the major record companies—the precise result the Judges in *Phonorecords III* sought to avoid. *Id.*; *see also* 8/24/20 Tr. 3443:22-3444:15 (Leonard).

222. Second, Professor Willig claims that "Shapley Values incorporate principles of fairness in the allocation of value created by the cooperation of multiple parties." Willig CWDT ¶ 16. However, Professor Willig provides no reason why the Shapley Value model is fairer than Nash-in-Nash bargaining. Shapiro WRT at 60. Rather, the explicit assumption in the Shapley Value model that parties are free to collude undermines Professor Willig's fairness argument. *See* Peterson WRT ¶ 84. Furthermore, while the 801(b) standard applicable to the *Phono III* case explicitly refers to fairness, the willing buyer/willing seller standard that governs this proceeding does not. Shapiro WRT at 60.

223. Third, as discussed below, Shapley Value fails to properly account for the parties' opportunity costs in this setting. Shapiro WRT at 60.

2. Myerson Value is Superior to Shapley Value in these Proceedings Because Myerson Captures Negative Externalities While Shapley Does Not

224. A major inherent flaw with Shapley Value in this setting is that it fails to reflect negative contracting externalities, which arise when one party is affected by contracts signed by other parties. Shapiro WRT at 61-62; 8/19/20 Tr. 2751:5- 2754:13 (Shapiro). Shapley Value does not capture the negative contracting externalities among the record companies, including the adverse impact on one record company that chooses not to license its music to webcasters if other record companies do license their music to webcasters. Shapiro WRT at 62. Because Shapley Value does not account for negative contracting externalities imposed on one record company by coalitions consisting of a webcaster and other record companies, it understates record companies' incentives to join the webcaster coalition by licensing to them. *Id.*

225. As Professor Shapiro testified, while Shapley Value systemically overstates the royalties record companies would negotiate with webcasters, Myerson Value corrects for this bias. Shapiro WRT at 62.[33]

226. In Professor Willig's model, under his improper assumption that all three major record companies are "must-have" for webcasters, the only entities affected by negative contracting externalities are independent record companies. Shapiro WRT at 62. Accordingly, the differences between Shapley Value and Myerson Value would be relatively small if one were to adopt Professor Willig's unfounded assumption that all three major record companies are "must-have" for webcasters. *Id.*; 8/19/20 Tr. 2755:1-2756:10 (Shapiro).

[33] Professor Shapiro explained that Myerson Value is equal to Shapley Value where the payoff structure corresponds to the one assumed by Professor Shapley in his 1953 research paper, but that Myerson Value is superior in settings involving contracting externalities, which cannot be captured using Shapley Value. Shapiro WRT at 62.

227. However, without Professor Willig's unfounded must-have assumption, Myerson Value produces significantly lower rates closer to the results of the Nash-in-Nash model. 8/19/20 Tr. 2750:6-2754:13 (Shapiro).

228. Figure 11 of Professor Shapiro's WRT demonstrates that even if one were to retain Professor Willig's overstated margin and opportunity cost inputs (*see* section II(C)), the royalty rate for advertising-supported webcasters drops from $[redacted] using the Shapley Value without the must-have assumption to $[redacted] using the Myerson Value, and the royalty rate for subscription webcasters drops from $[redacted] per performance to $[redacted] per performance. Shapiro WRT at 63. These results are comparable to the results of Professor Shapiro's Nash-in-Nash bargaining model. *Id.*; 8/19/20 Tr. 2819:2-15 (Shapiro).

229. At trial, Professor Willig attempted to distinguish Professor Shapiro's use of the term "Myerson Value" from Professor Myerson's original research paper for which that term was named. 8/6/20 Tr. 745:19-746:13 (Willig). However, Professor Shapiro explained that subsequent research publications have established the differences between Myerson Value and Shapley Value discussed above, and that Professor Shapiro's recursive Nash-in-Nash model corresponds to the Myerson Value. 8/19/20 Tr. 2750:6-2754:13 (Shapiro).

iii. Professor Willig Overstates Record Company Opportunity Cost

230. Professor Willig's Shapley and Nash-in-Nash models measure the "fallback" values of each party in the model. Professor Willig treats these fallback values as a way to demonstrate the opportunity costs faced by labels when licensing a statutory service, and the fallback values are one of the key drivers of the outcome of his models. *See* Willig CWDT ¶¶ 23-24; *see also* 8/6/20 Tr. 789:18-790:10 (Willig); Peterson AWRT ¶¶ 101-102, 109-113.

231. Professor Willig's calculations and methods for deriving fallback values, however, are fraught with factual and legal errors. Put simply, Professor Willig overstates opportunity cost in multiple ways, including through a separate application of the "must have" assumption (which is addressed separately in Section II(C)(i))), awarding indies 100% retention of plays in a "walk away" scenario, treating all indie labels as a single entity, allowing for collusion between record companies in the model, and aggressively interpreting ambiguities in the Zauberman study, which is itself unreliable in any event. (The flaws in Professor Zauberman's study are addressed in Section II(D) below.)

1. Professor Willig Assumes that All Labels—Even "Non-Essential" Indie Labels—Retain 100% of Plays

232. Professor Willig assumes that the major record labels in his modeling (*i.e.*, "essential" labels) could shut down a service. When that happens, Professor Willig assumes that each major label would retain the same number of plays that it previously enjoyed on the statutory service (which Professor Willig had apportioned according to each label's market share) because 100% of the plays would be diverted to another music service or other form of listening. For instance, if an essential label had a 25% share of performances on the service, Professor Willig would assume it retains a 25% share of the diverted performances across all other distributors. This assumption that each label retains 100% of its plays in a shut-down scenario is not only completely unrealistic, it also ensures that in Professor Willig's model the label can earn royalties on all of those lost plays from elsewhere. Peterson AWRT ¶¶ 103-105; Willig CWDT ¶¶ 31-34.

233. The assumption that a label would retain a 100% share of diverted plays (or anything close to it) ignores that (a) most users do not know which artists and songs are associated with a particular label, Simonson WRT ¶ 28; 8/6/20 Tr. 789: 9-17 (Willig);

Zauberman WRT ¶ 36 ("Everyday listeners do not experience 'labels' but rather experience music genres, artists, and songs . . . listeners often do not know the label with which a given song is associated."), and (b) some of the plays would be diverted to another form of listening where the user does not control song selection at all (*e.g.*, satellite radio) or that combine elements of user control with playlists or other lean-back listening where songs are selected by others. *See* SXM-PAN PFFCL ¶¶ 112, 132; 8/19/20 Tr. 2796:17-2798:7 (Shapiro); *see also id.* 2779:2-12. Professor Willig utterly failed to explain how any label would actually get 100% of the plays diverted to other sources of listening in the event of a blackout.

234. The assumption that labels retain 100% of plays also overlooks that noninteractive services may promote a higher number of plays than other listening alternatives, which means that the 100% retention assumption overstates the labels' opportunity cost. Peterson AWRT ¶¶ 119-121. In fact, SoundExchange's own survey evidence suggests that in the absence of a statutory service, many individuals would in fact listen to less music. 8/10/20 Tr. 1099:8-15 (Willig); 8/25/20 Tr. 3734:14-3725:13 (Peterson); Zauberman WDT at ¶ 72 fig. 8 (48% of respondents that completed the survey said they would "do something other than listen to music").

235. For major labels, the assumption that a label would retain all of its plays is rooted in the fact that Professor Willig assumes the statutory service in his model would shut down without any one of the major labels. Peterson AWRT ¶ 104; 8/25/20 Tr. 3730:18-3731:7 (Peterson).

236. But, Professor Willig makes the same assumption that independent labels would retain 100% of plays commensurate with their market share in a scenario where the service shut down or the label's music was no longer available on the service, even though independent labels

lack the power to shut down the statutory service in Professor Willig's model. 8/6/20 Tr. 791:6-792:4, 808:3-24 (Willig); Peterson AWRT ¶ 110.

237. Assuming 100% retention of plays for a non-essential, independent label is not supportable or economically rational as a factual matter because a noninteractive service that is still operating could simply shift plays to other music. 8/6/20 Tr. 792:5-793:11 (Willig); 8/19/20 Tr. 2796:16-2798:21 (Shapiro); Peterson AWRT ¶¶ 108, 110. Indeed, statutory services operate in such a way that consumers cannot pick certain songs and are unlikely to notice if specific songs are missing from the service. 8/19/20 Tr. 2797: 7-19; (Shapiro).

238. Professor Willig assumes that even if a small, nonconsequential label left the service, listeners would be able to detect the label's music was no longer on the service and would seek out that label's music elsewhere. SoundExchange has presented no factual evidence to back up Professor Willig's assumption or demonstrate that users would react in such a way. 8/6/20 Tr. 792:5-793:11 (Willig).

239. Professor Willig's assumption that independent labels are capable of retaining 100% of plays in a scenario in which they do not reach a license agreement with a statutory service is so unsupported and counter-intuitive that multiple service experts initially criticized it as an inadvertent, mathematical error in Professor Willig's model. Peterson AWRT ¶ 110; Shapiro WRT at 92; 8/19/20 Tr. 2796:16-2798:7 (Shapiro). At trial, Professor Willig revealed he actually intended to make this assumption. 8/6/20 Tr. 791:20-793:11 (Willig).

240. The 100% retention assumption in Professor Willig's model assures that a label is unlikely to face significant losses by walking away from a license with a statutory service. Because the labels in Professor Willig's model will not lose significantly by not licensing the service, it ensures that opportunity costs always remain high and that the results of the model are

not competitive. 8/25/20 Tr. 3730:18-3732:16, 3738:10-3741:12 (Peterson); 8/19/20 Tr. 2784:23-2787:12 (Shapiro). In other words, Professor Willig uses this assumption to ensure that the labels have all of the power in a hypothetical negotiation.[34] This is contrary to past legal findings of the Judges regarding the nature of effective competition and contrary to past factual findings concerning how noninteractive services can ensure competition by steering away from more expensive content. *See, e.g.*, *Web IV*, 81 Fed. Reg. at 26356 (equating the ability of services to steer towards or away from certain content with competition in the market); *see also* 8/18/20 Tr. 2637:1-2639:11 (Shapiro); Peterson AWRT ¶ 23.

241. The 100% retention assumption is just one of the ways that Willig insulates his models from any semblance of competition. *See* 8/25/20 Tr. 3730:18-3732:16 (Peterson); Peterson AWRT ¶¶ 9-10. However, this single assumption is a major driver of Willig's results. As Dr. Peterson showed, the assumption creates a scenario where indie labels and purportedly "must-have" Majors have the same "fall back" values, which is counterintuitive. And it is also the case that removing the assumption that 100% of plays are retained and basing retention on other, more logical markers (like the value that each label can guarantee itself in the Shapley model when in a coalition with no other members, which depends on that label's market share) leads to exponentially lower "fall back" values for most labels than those calculated by Professor Willig. Peterson AWRT ¶¶ 109-113 & fig. 8; 8/25/20 Tr. 3738:10-3741:12 (Peterson); 8/19/20 Tr. 2786:6-2791:10 (Shapiro); *see also* Shapiro WRT at 66-67 fig. 15 (recalculating the royalty

[34] Professor Willig misleadingly referred to this feature of his analysis as reflecting "symmetric power," but a careful reading of his testimony shows that the so-called symmetry involves the service "not operating" or "going out of business" versus "no proceeds to any of the labels *attained through that distributor*." *See* 8/9/20 Tr. 1072:16-1074:6. That is not symmetrical bargaining power. As Judge Strickler put it, the service is "free to destroy its own business by refusing to license," while the labels simply risk forgoing revenue from that particular service. *Id.* at 1073:6-1074:6.

rate from Professor Willig's models with different inputs, including the assumption of 100% retention).

242. The 100% retention assumption is also one of the ways Professor Willig sets up a false premise that his models are not sensitive to particular assumptions (particularly the must-have assumption). Professor Willig claims that the must have assumption does not matter only because he unrealistically assumes all labels are awarded 100% of their plays in a walk-away scenario regardless of must-have status. This unsupportable assumption ensures that each label's fallback value remains artificially inflated even if the similarly unfounded must-have assumption is removed. 8/25/20 Tr. 3730:18-3732:16 (Peterson); *see also* Peterson AWRT ¶¶ 109 fig. 8.

2. Opportunity Costs Are Also Overstated Because the Shapley Value Model Allows for Collusion Among Labels

243. Shapley models are a form of cooperative game theory that allows for players to form coalitions and work together. Peterson AWRT ¶¶ 83-85, 88-91.

244. The forming of coalitions means that, in his Shapley model, Professor Willig assumes there are situations where multiple labels work together to achieve a common outcome. Peterson AWRT ¶¶ 83-86, 114-116. This assumption is unrealistic, however, when antitrust laws are taken into account. *See* 15 U.S.C.A. § 1 (West) (declaring collusion resulting in the restraint of trade illegal); *see also Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004) ("negotiation between competitors may facilitate the supreme evil of antitrust: collusion").

245. The ability to work together, which is inherent in Shapley modeling, ensures that a coalition of multiple labels can shut down a statutory service in the model, even if they are not independently "must have." Thus, even if the "must have" and 100% retention assumptions are corrected for, the ability to collude remains an impediment to effective competition in the

Shapley model. Peterson AWRT ¶¶ 114-118; 8/25/20 Tr. 3731:18-3732:16 (Peterson). As Dr. Peterson explained, this is one of the reasons why a Shapley model is inappropriate for present purposes, and Professor Willig's Shapley model simply cannot be corrected in a way that ensures it reflects effective competition. *Id.*

246. During the hearing, Professor Willig made efforts to downplay the Nash-In-Nash model that he originally championed and insisted that a Shapley model is preferable. This occurred after service experts demonstrated how the Nash-In-Nash model could be corrected to achieve more competitive results than the Shapley model by removing the "must have" and "100% retention" assumptions, and that, by making those adjustments, the results of the Nash-In-Nash model would be materially lower than Professor Willig's own rate recommendations. *See, e.g.*, Peterson AWRT ¶¶ 139-145 (demonstrating a rate of $[redacted] per play for nonsubscription services when re-running Professor Willig's Nash-in-Nash model to correct for faulty assumptions, including assumptions that hindered competition in the model); Shapiro WRT at 66-67 (demonstrating rate of 0[redacted] per play for ad-supported services correcting for same).

247. Professor Willig argued during the hearing that the opportunity for collusion within his Shapley model is not material due to different orderings of the players. *See* 8/5/20 Tr. 389:5-390:11 (Willig). However, as service experts explained, this does not solve the competition problems inherent in the model. 8/26/20 Tr. 3921:21-3924:4 (Shapiro) (explaining how the Shapely Value is inherently unable to eliminate monopoly power, regardless of having multiple orderings); *see also* Peterson AWRT ¶¶ 93-96, Figs. 6-7; 8/24/20 Tr. 3443:4-3444:15 (Leonard).

3. Professor Willig Overstates Opportunity Costs by Treating All Independent Labels as a Single Entity

248. Professor Willig's Shapley model contains six players, which are comprised of two statutory services and four record labels. The four record labels are comprised of the three major record labels that exist in the real world plus an entity representing all other record labels combined (i.e., all independent labels). 8/5/20 Tr. 321:4-322:8 (Willig).

249. The model assumes that the entity that represents the amalgam of independent labels is a single entity with all of the labels acting in concert. *Id*. This assumption is unrealistic since it would violate the antitrust laws if all independent labels were to act collectively. *See* 15 U.S.C.A. § 1; *Verizon Commc'ns Inc*., 540 U.S. at 408. Moreover, the combination of independent labels is assumed to have a market power greater than two of the Majors. Willig CWDT at 26 fig. 7.

250. As explained above, Professor Willig overstated opportunity cost for independent record labels by awarding 100% retention of the labels' plays in any scenario where the statutory service in his model is not licensed. Consolidating the independent labels means that the walk-away power of those labels will be grossly overstated even if the 100% retention assumption is corrected for. Peterson AWRT ¶ 113; 8/25/20 Tr. 3740:21-3741:13 (Peterson).

251. Consolidating the independent labels also compounds the problem of players in the Shapley model being able to collude because it awards the independent labels sufficient market power to significantly diminish or shut down a statutory service when working in concert with one of the Majors as part of a coalition. Peterson AWRT ¶¶ 114-117; 8/25/20 Tr. 3730:18-3732:16 (Peterson).

4. Professor Willig Drives Higher Label Opportunity Cost Through Aggressive, Self-Serving Interpretations of the Zauberman Survey and Share of Ear Data

252. Professor Willig's primary source of information about how consumers would shift listening behavior if a streaming service shut down or failed to reach a license with one of the labels in his model is the consumer survey conducted by Professor Gal Zauberman. That survey is beset with various problems and inconsistencies that are addressed in Section II (D), *infra*. One of the major problems with the Zauberman survey is that it purports to provide information about how listeners would shift their music listening habits in the absence of a statutory streaming service, yet, due to imprecise questions, the results of that inquiry are in many cases ambiguous. *See infra* ¶¶ 288-290.

253. Professor Willig uses the Zauberman study to supply inputs for his game-theory models concerning how consumers would shift their listening habits and how they would spend money in the absence of a statutory streaming service. The Zauberman survey contains multiple major ambiguities surrounding these questions, and Professor Willig makes various assumptions about how to resolve each ambiguity. Unsurprisingly, each of these assumptions is self-serving, and in each instance Professor Willig opts to resolve the ambiguity in a manner that maximizes label opportunity costs in his model. *See* 8/24/20 Tr. 3444:18-3448:25 (Leonard).

254. The first faulty assumption involves the purchase of CDs/MP3s/Vinyl. In the Zauberman survey, survey participants are asked if they would shift listening time to CDs/MP3s/Vinyl, but participants are never specifically asked if they would purchase *new* music. *See infra* ¶ 300. Though the question of whether survey respondents would actually purchase new media is not addressed by the study, Professor Willig assumes that each survey respondent who had not listened to CDs/MP3s/Vinyl in the past 30 days and who indicated that

they would shift some portion of future listening time to this form of listening would in fact purchase new CDs/MP3s/Vinyl at a rate equal to the spending of an average purchaser of those forms of media. 8/6/20 Tr. 842:22-843:19 (Willig). Professor Willig conceded during the hearing that this was "an inaccuracy." *Id.* at 844:2.

255. Professor Willig's assumption that respondents would purchase new music is unreasonable. *See* Leonard CWRT ¶ 22. First, Professor Willig did not consider that a respondent may shift listening solely to a collection of music that person already owns. 8/6/20 Tr. 843:6-844:2 (Willig). Second, Professor Willig never considered that respondents may obtain pirated copies of CDs and MP3s rather than making new purchases. 8/10/20 Tr. 1089:15-1090:17 (Willig). Third, Professor Willig never evaluated or considered whether listeners to free-to-the-user statutory streaming services (like the survey respondents) reflect the same average spending on CDs/MP3s/vinyl as other consumers. 8/6/20 Tr. 847:16-848:4 (Willig).

256. Another major ambiguity in the Zauberman survey concerns whether survey respondents who indicated they would switch listening to a paid on-demand subscription service would actually purchase a new subscription. The Zauberman survey did not ask respondents whether they currently have an existing subscription to an on-demand service; the survey instead asked whether respondents had listened to an on-demand subscription service within the last 30 days. Zauberman WDT App. D, Q1; *see infra* ¶¶ 297-99. Though the survey results were ambiguous on this point, Professor Willig assumed that any respondent that indicated they had not listened to an on-demand subscription service within the last 30 days was not a current subscriber and would have to purchase a new subscription. *See* Leonard CWRT ¶ 18. He conducted no investigation or analysis to justify the assumption. 8/6/20 Tr. 798:21-799:9 (Willig); 8/24/20 Tr. 3444:18-3445:20 (Leonard); Leonard CWRT ¶ 18.

257. Professor Willig also overlooked instances where survey respondents provided inconsistent results. The Zauberman survey involved a series of questions whereby some respondents were asked questions about how they would shift listening behavior and then asked a separate question regarding how they would allocate listening time at a set point in the future. Some of those respondents indicated that they would switch listening to CDs/MP3s/vinyl but also indicated they would allocate no time to CDs/MP3s/vinyl on the set date in the future. Similarly, some respondents indicated they would purchase an on-demand subscription but also indicated they would allocate no time to a subscription service on the set date in the future. In both instances, Professor Willig chose to assume the respondent would purchase new music or an on-demand subscription even though they assigned zero time to those alternatives. Peterson AWRT ¶¶ 137-138; 8/25/20 Tr. 3746:8-3748:10 (Peterson); 8/6/20 Tr. 848:5-850:10 (Willig); 8/24/20 Tr. 3446:5-3447:5 (Leonard); Leonard CWRT ¶ 21.

258. As Dr. Peterson explained, assuming a respondent would make a purchase after the same respondent said they would not use that product is not sound methodology, and Professor Willig should have disregarded data from the respondents who provided potentially inconsistent answers. *Id.*; *see also* Leonard CWRT ¶ 21.

259. Notably, questions concerning future allocation of listening time came later in the questioning sequence than the questions concerning which forms of listening a respondent would switch to, so it is likely that some respondents took more time to consider whether they would actually spend the extra money on a paid subscription or CDs/MP3s/vinyl and decided that was not a realistic option for them. 8/24/20 Tr. 3446:5-3448:7 (Leonard).

260. Even Professor Willig initially admitted during his deposition (before later attempting to change his testimony) that in instances where a respondent to the Zauberman

survey indicated they would switch to a form of listening but did not allocate any future listening time to that same form of listening, it is "ambiguous" as to whether the respondent would actually spend money in the way he assumes when constructing his Shapley model. 8/10/20 Tr. 1093:20-1094:6, 1095:25-1096:11 (Willig).

261. Professor Willig's assumptions and treatment of ambiguous results are not trivial; in fact, they significantly affect his results. Listeners that Professor Willig treated as switching to a subscription on-demand service and listeners that he treated as purchasing CDs/MP3s/vinyl comprised only 23% of the relevant respondents to the Zauberman survey, but their assumed spending on on-demand subscriptions and CDs/MP3s/vinyl comprised [redacted] of the opportunity cost in Professor Willig's model. Peterson AWRT ¶¶ 133-138; 8/25/20 Tr. 3747:21-3748:15 (Peterson).

262. Additionally, 44% of the respondents that Professor Willig treated as switching from a non-subscription statutory service to a paid on-demand service also indicated they would not listen to the paid service on a date in the future. Peterson AWRT ¶¶ 133-138; 8/25/20 Tr. at 3746:8-3748:15 (Peterson). Similarly, 34% of the respondents that Professor Willig treated as switching from a non-subscription statutory service to purchasing CDs/vinyl/MP3s indicated they would not listen to CDs/vinyl/MP3s on a date in the future. Peterson AWRT ¶ 137. Thus, respondents that provided inconsistent answers—which Professor Willig admitted were ambiguous—account for a large portion of the opportunity cost in Professor Willig's models.

263. Not only did Professor Willig make dubious assumptions, but he often made multiple assumptions about a single respondent. He treated numerous respondents who had previously used a free statutory streaming service as their primary listening method as likely to

purchase *both* a paid streaming subscription and CDs/MP3s/vinyl in the event that the free statutory service was no longer available. 8/6/20 Tr. 834:10-835:21 (Willig).

264. As Drs. Peterson and Leonard explained, there are different types of consumers with different levels of willingness to pay. *See* Leonard CWRT ¶¶ 19-20; 8/24/20 Tr. 3447:6-3448:7 (Leonard). It is unreasonable to expect listeners to a free streaming service that have demonstrated low (or zero) willingness to pay to suddenly be willing to spend $120 per year on a subscription service <u>and</u> also spend the same amount on CDs/MP3s/vinyl as an average purchaser of those media. Leonard CWRT ¶¶ 19; 8/24/20 Tr. 3447:6-3448:7 (Leonard); 8/25/20 Tr. 3698:6-10 (Peterson). Further, Professor Willig conducted no independent analysis that would justify his assumption that streaming music consumers would experience such rapid, drastic shifts in spending behavior. 8/25/20 Tr. 3697:24-3698:16 (Peterson); Peterson AWRT ¶ 29; 8/6/20 Tr. 847:16-848:4 (Willig); 8/10/20 Tr. 1120:3-1122:1 (Willig).

265. In addition to the Zauberman survey, Professor Willig also used a secondary data source, the "Share of Ear" report, as a basis for fallback values inputted into his theoretical models. But the Share of Ear data, like the Zauberman study, was fraught with ambiguities. *See* Leonard CWRT ¶¶ 23-29. Ultimately even Professor Willig admitted that, compared to other available data sources, the Share of Ear data was "really not comparably informative" and "wasn't particularly as apt . . . for the purposes at hand." 8/10/20 Tr. 1090:18-1092:16, 1099:16-1101:1 (Willig).

266. One of the primary problems with the Share of Ear data is that, like the Zauberman survey, it does not state whether consumers that listen to CDs/MP3s/vinyl actually purchase new copies of those forms of media as opposed to listening to existing collections. 8/10/20 Tr. 1090:18-1092:16; *see also* Shapiro WRT at 53-54; Leonard CWRT ¶ 26. Instead,

the Share of Ear data simply asks consumers about listening to "owned" music, which Professor Willig admitted was "somewhat ambiguous." 8/10/20 Tr. 1092:6-16. He also admitted that he was not "aware of anything within the Share of Ear data that would specify that the owned music was purchased recently." *Id*. By assuming that the entire diversion of plays to CDs represents diversion to new CDs, Professor Willig overstates the number of plays diverted to CDs that would represent an opportunity cost to SoundExchange. Leonard CWRT ¶ 26.

267. Professor Willig makes a similar mistake concerning subscriptions to on-demand streaming. When considering diversion to on-demand subscriptions based on the Share of Ear data, as with the Zauberman study, Professor Willig assumes consumers will have to purchase new subscriptions. That assumption is not supported, and it contradicts other evidence from this case, including the Hanssens survey, which indicated that "approximately 57% of diversion from an advertising-supported webcaster to a subscription interactive service would be toward *existing* subscriptions." Shapiro WRT at 53-54 (emphasis original); Leonard CWRT ¶ 26.

268. Professor Willig further admitted that the Share of Ear data was inconsistent with the Zauberman survey in that it failed to account for diversion to non-music listening alternatives. 8/10/20 Tr. 1099:8-1101:1 (Willig). Whereas a significant number of respondents to both the Zauberman and Hauser surveys indicated they would listen to non-music options in the absence of a statutory streaming service, consumers who were polled for the Share of Ear data were not given a similar option. *See* Hauser WDT App. R; Leonard CWRT ¶ 25. Due to the lack of information on non-music alternatives, opportunity costs will be overstated. Leonard CWRT ¶ 25 ("Recalculating Dr. Willig's opportunity cost, assuming 19% diversion to nonmusic alternatives, reduces it from [$[redacted]].").

269. Finally, Professor Willig's use of the Share of Ear data is problematic because it is built on an assumption that what the study tracked, share of listening time, is somehow indicative of diversion that would occur in the real world if a statutory streaming service were not available. As Dr. Leonard explained, the economic literature and market evidence suggests that other factors, including whether a product is seen as "premium" and the level of interactivity, are the key drivers of substitutability among different forms of music listening. Leonard CWRT ¶¶ 27-29 & n.50 (citing TX 2039* at 2, 20, 23). There is no rational economic basis for assuming that diversion would be proportional to listening shares. *Id.*

5. Additional Errors in Professor Willig's Models Increase Opportunity Cost

270. In addition to the various assumptions and anti-competitive features that Professor Willig incorporated into his game theory models in order to inflate record label opportunity costs, he also made some basic mistakes. Those mistakes likewise tend to increase opportunity cost in his model.

271. Professor Willig miscalculates average consumer monthly spend on CDs/MP3s/vinyl. Professor Willig first calculated "Average Monthly Royalties per Purchaser" separately for each of CDs, vinyl, and digital downloads, and he then calculated a weighted average of the three numbers based on retail spending for each form of media. This was a mistake that biases the average toward the more expensive forms of media; in order to determine a weighted average, Professor Willig should have weighted the average based on number of units sold for each type of media. Shapiro WRT at 84-85.

272. Correcting for Professor Willig's mistake lowers the "Weighted Average Monthly Royalties per Purchaser" from $[redacted] to [redacted]. Shapiro WRT at 84-85.

273. Professor Willig also makes a basic logical mistake by treating the decision to purchase CDs/MP3s/vinyl as binary. In his model, a consumer either purchases the same amount as an average purchaser, or purchases nothing at all. As Professor Shapiro explained, "[i]n reality, however, consumers choose how much or how little they listen to these media during a month, and make purchases accordingly." For that reason, Professor Willig should have calculated the amount individuals would spend on CDs/MP3s/vinyl based on the amount of expected usage. Shapiro WRT at 86. In fact, Professor Willig took a similar approach that factored in expected usage when building a similar model in a prior case, *SDARS III*. *Id*. at 87. He did not explain why he failed to follow that same approach here.

274. Indeed, data from the Zauberman study indicates that respondents switching from a statutory streaming service to CDs/MP3s/vinyl would only allocate a small percentage of future listening time to CDs/MP3s/vinyl (14.1% of time for users of a free service and 9.9% for users of a subscription service). Shapiro WRT at 86-87. Thus, assuming that these individuals would spend the same amount as an average purchaser significantly inflated opportunity cost in the models. *Id*. And when Professor Shapiro corrected for this error, it resulted in an average spend of $[redacted] or $[redacted] per month, which is significantly lower than the $[redacted] average spend amount employed by Professor Willig. *Id.* at 88-89.

275. Finally, Willig read into the record his admission from his deposition that "[w]hat's in my model very specifically is the diversion [or] the loss of listenership at other sources of distribution . . . and there's no specific empirical input into my fashioning of the entire Shapley model of assigned promotional effect, is fair to say." 8/9/20 Tr. 1061:9-24. This necessarily overstates his opportunity cost. 8/24/20 Tr. 3408:1-18 (Leonard) (explaining how

incorporating promotional benefit into an opportunity cost analysis would lower the opportunity cost).

iv. Professor Willig Overstates Webcaster Margins

276. Though Professor Willig testified that, in his Written Rebuttal Testimony, he "made the requisite alterations in [his] quantifications in [his] rebuttal testimony" such that "a lot of, for example, what Mr. Ryan criticize[d] [him] for is no longer applicable," 8/5/20 Tr. 360:7-362:7 (Willig), in fact Professor Willig utilizes significantly overstated marginal profit rates for Pandora in his analysis. And he does not rely on any other webcaster's financial data.

1. Professor Willig Incorrectly Allocates the Cost Savings from a Reduction of Listening on the Free Tier to Pandora's Other Tiers and Off-Platform Services

277. First, Professor Willig continues to allocate product development costs to the advertising-supported and Pandora Plus services in proportion to their respective share of revenue.[35]

278. Pandora's 2017 Form 10-K describes product development costs as follows:

> Product development consists primarily of employee-related costs, including salaries and benefits related to employees in software engineering, music analysis and product management departments, facilities and equipment costs, information technology costs and amortization expense related to acquired intangible assets. We incur product development expenses primarily for improvements to our website and the Pandora app, development of new services and enhancement of existing services, development of new advertising products and development and enhancement of our personalized playlisting system. We have generally expensed product development as incurred. These amounts are offset by costs that we capitalize to develop software for internal use. Certain website development and internal use software development costs are capitalized when specific criteria are met. In such cases, the capitalized amounts are amortized over the

[35] *See* Willig WRT at 138, rows [15]-[18].

> useful life of the related application once the application is placed in service.[36]

279. Product development costs include a mix of fixed and variable costs supporting general product features, product and audience analytics, quality of service, and catalog support across all tiers of service. Ryan WRT ¶ 22. These costs are largely comprised of personnel expenditures, as well as some development-related infrastructure and software costs. *Id.* Personnel costs [redacted], and the infrastructure and software costs are largely fixed. *Id.* As Pandora's Vice President of Financial Planning and Analysis, Jason Ryan, testified, it is therefore reasonable to estimate that a 10% reduction in listening hours on the free tier [redacted]. *Id.*; *see also* 8/31/20 Tr. 4670:16-4671:2 (Ryan).

280. Based on Pandora's [redacted], Mr. Ryan testified that if Pandora experienced a 10% reduction in advertising revenue on the free tier, Pandora would [redacted]. Ryan WRT ¶ 22.

281. If such scaling back occurred, the variable cost savings from a reduction in usage on the free tier would be experienced on the free tier, rather than spread across multiple tiers, "because that is the tier that's driving the change." 8/31/20 Tr. 4671:3-9 (Ryan).

282. It is therefore inappropriate for Professor Willig to allocate potential variable cost reductions based on reduced listening on the Pandora free tier to other tiers or services or to Pandora's off-platform activities. 8/31/20 Tr. 4671:10-13 (Ryan).

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[36] TX 5043 at 54.

2. Professor Willig Failed to Deduct Non-Music Revenue from His Calculation of Pandora's Margin

283. For his webcaster margin analysis, Professor Willig relies on the projections from Scenario 2 from the Proxy Statement.[37] As an initial matter, the Scenario 2 projections were created in June 2018 "to present a more optimistic view" of Pandora's financial future, TX 5045 at 66, and "given their purpose, they focused primarily on 'upside' assumptions . . . based on optimal execution of Pandora's business plans and strategies, as well as the market moving favorably in Pandora's direction." Ryan WRT ¶ 34. A "more recent and more balanced picture of Pandora's financial condition" would have been the Long Range Scenario ("LRS") that Pandora created for its "routine business planning." *Id.* ¶¶ 36, 39. But Professor Willig does not even use the optimistic Scenario 2 projections correctly.

284. These projections included an expectation of growth in *non-music* content (sports, news, talk) on Pandora. Ryan WRT ¶ 8. Indeed, the model underlying Scenario 2 projected non-music revenues to be $[redacted] in 2021, $[redacted] in 2022, [redacted] in 2023, $[redacted] in 2024, and [redacted] in 2025. *Id.* These projections included a forecast that 12% of ad-supported listening by 2025 would be associated with non-music content. 8/31/20 Tr. 4671:25-4672:6 (Ryan).

285. Despite this projection of substantial revenue from non-music content, Professor Willig did not deduct this non-music revenue from his calculation of Pandora's margin.[38] It is inappropriate for Professor Willig to assume that all free tier revenue projected in the Merger Proxy scenarios was generated by music content on the free tier as this overstates Pandora's

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[37] Willig CWDT at 92, ¶ 3 ("I utilize the Scenario 2 projections in my analysis because Pandora's investment bankers prepared discounted cash flow valuation analyses using these Scenario 2 projections, which produced valuations in-line with the $3.5 billion market price paid by SiriusXM to acquire the company.").

[38] *See* Willig WRT at 138, rows [1]-[4].

revenue. Ryan WRT ¶ 8; 8/31/20 Tr. 4673:10-13 (Ryan). This is true regardless of whether the projected non-music revenue was realized as the revenues were built into the model. 8/31/20 Tr. 4673:14-18 (Ryan).

286. Professor Willig estimates relevant on-platform advertising revenue to grow from a projected $[redacted] in 2021 to a projected $[redacted] in 2025, a growth of approximately [redacted].[39] However, once these figures are corrected to exclude the share of revenue attributable to non-music content, the advertising revenue as depicted in Scenario 2 would be projected to be only approximately $[redacted] in 2021[40] [redacted] in 2025[41] (growth of a little over [redacted]).

D. Professor Zauberman's Survey Is Flawed and Should Not Be Relied Upon by the Judges

287. Professor Zauberman's survey suffers from several flaws that render its results unusable for this proceeding. *See, e.g.*, 8/27/20 Tr. 4363:23-4365:6 (Hauser); Hauser WRT ¶¶ 5-12, 20-58; 8/24/20 Tr. 3444:18-3448:25 (Leonard).

i. Professor Zauberman's Inconsistent Definitions Do Not Reflect Industry Best Practices

288. One of Professor Zauberman's most egregious flaws, from a survey design perspective, involved his unintentional toggling between his initial definition of "free streaming radio service," and an incorrect definition that described "on-line streams of AM/FM radio stations" as a service that "allow you to listen to customized radio stations with advertisements," like Pandora. *See* 8/27/20 Tr. 4245:19-4251:18 (Zauberman). He recognized the gravity of his

[39] *See* Willig WRT at 138, row [1].

[40] $[redacted] - $[redacted].

[41] $[redacted] - [redacted].

error when he admitted that, contrary to the language of his erroneous definition, simulcasts *are not* customizable. *See id.* at 4246:1-4247:25 ("Q. And earlier, I think we established that on-line streams of AM/FM radio stations *do not* allow you to listen to customized radio stations with advertisements, right? A. Correct.") (emphasis added); *see also id.* at 4230:18-4232:19 (discussing differences between customized radio and simulcasts).

289. Professor Zauberman conceded that this inconsistency in his definitions was not intentional and he was not aware of the error until he was asked about it on the stand:

> JUDGE STRICKLER: Were you intending to change the definition?
>
> THE WITNESS: Again, I'm – sitting while testifying, I cannot recall, no. I – I don't think so.
>
> . . .
>
> Q. And you had no idea before I showed this to you today that the definitions you used were actually incorrect throughout your survey, correct?
>
> A. I did not recall that they were different. That is correct.

8/27/20 Tr. 4248:21-25, 4253:8-12.

290. Zauberman ultimately admitted that "[i]ncluding different definitions for the exact same term in a survey is not a best practice in [his] field." *Id.* at 4253:19-23; *see also id.* at 4242:11-4243:18, 4244:25-4245:18 (discussing how drafting definitions is "very important" to avoid confusing respondents and how his goal in repeating the definitions throughout the survey was to avoid any ambiguity).

ii. The Zauberman Survey Suffers From Cheap-Talk Problems

291. Professor Zauberman survey also suffers from cheap-talk or hypothetical-bias problems. As Professor Hauser explained at the hearing, "what's known as a cheap talk

problem" occurs "if we just ask people what options [they] would switch [to], and there's no real cost to them in switching, not just switching cost, but also . . . the actual prices of that, they're much more likely to choose multiple options." 8/27/20 Tr. 4345:15-22. Where respondents are allowed to choose multiple options, they are more likely to select paid options that they would not in fact pay for in the real world. *Id.* at 4346:25-4348:11 (Hauser). As NAB's expert Dr. Leonard explained, this concept is known in the economics literature as "hypothetical bias." 8/24/20 Tr. 3421:15-3423:21 (testifying that respondents to these kinds of surveys "simply don't really consider how much things cost" or "their budget constraint"); Leonard CWRT ¶¶ 19-21 & n.37 (citing academic literature).

292. The Zauberman Survey results are a textbook example of hypothetical-bias or cheap-talk problems. For example, the switching question asked respondents which of eight options they would use instead of a free streaming radio service, and it allowed them to choose as many options as they wanted. *See* Zauberman WDT App. D, Q2. As Professor Hauser explained, when the Zauberman respondents were actually asked to allocate time to the music-listening options they selected, "44 percent of those who selected a new paid on-demand subscription . . . allocated zero percent of their time" to that subscription. 8/27/20 Tr. 4349:17-4350:1; *see also* 8/24/20 Tr. 3446:5-3447:7 (Leonard); Leonard CWRT ¶ 21. The fact that they allocated no time to this option indicates that they probably would not pay for it in the real-world. Leonard CWRT ¶ 21; 8/24/20 Tr. 3447:21-3448:7 (Leonard); 8/27/20 Tr. 4349:17-4352:1 (Hauser).

293. One can also see evidence of this cheap-talk problem by comparing the results of the Zauberman survey switching question (where respondents indicated what services they *would switch* to) to the results of the Hauser survey consideration question (where respondents

indicated what services they would *consider switching* to). On average, Hauser survey respondents selected 12.6 out of 23 response options (54.8%) in the consideration question (Q4), compared with 3.85 out of 7 response options (55.0%) in the Zauberman survey. 8/27/20 Tr. at 4350:9-25 (Hauser); Hauser WRT ¶ 63 tbl. 2 & n.126; TX 5026 (Zauberman Survey Data). This striking similarity between the two data sets is powerful evidence that the results of Zauberman's switching question do not provide reliable evidence of the services that respondents would *actually* switch to because respondents are not forced to weigh the costs associated with switching. 8/27/20 Tr. at 4350:9-25 (Hauser); *see also* Leonard CWRT ¶ 19.

294. That conclusion is further reinforced by the fact that a number of respondents to the Zauberman survey indicated they would use more than one paid subscription service. 8/24/20 Tr. 3447:6-3448:7 (Leonard); Leonard CWRT ¶¶ 19-20. As Dr. Leonard explained, it is "economically implausible" that users of free services who have demonstrated a low willingness to pay would replace their zero-fee service with not just one, but multiple paid subscriptions. 8/24/20 Tr. 3447:6-3448:7; Leonard CWRT ¶¶ 19-20; *see also* TX 2039* at 20; TX 2040 at 53-54.

iii. Explicit Instruction to Select Music-Listening Options Biased Survey Results

295. Though Professor Zauberman acknowledged that some forms of listening, like simulcast, offer a mix of both music and non-music content, he nonetheless asked respondents which "*music-listening option(s)*" they would switch to. Zauberman CWDT App. D, Q2 (emphasis added); 8/27/20 Tr. 4229:7-11. As Professor Hauser testified, this explicit instruction to focus on music-listening options could suggest to respondents that the researcher was interested only in respondents switching to music-listening options, which could prompt respondents to favor the music-listening options rather than Professor Zauberman's option to "do

something other than listen to music." 8/27/20 Tr. 4364:19-4365:6; Hauser WRT ¶¶ 7, 28-30. Though the Zauberman survey was pretested, Professor Hauser explained it is possible this bias toward music options was undetected in pretesting. *Id.*

296. In addition, Professor Zauberman did not describe the "do something other than listen to music" option in any detail. 8/27/20 Tr. 4229:12-4230:14 (Zauberman); Zauberman WDT App. D, Q2; Hauser WRT ¶¶ 7, 29. As Professor Hauser explained, respondents may have had difficulty knowing or recalling available non-music alternatives. Hauser WRT ¶ 29.

iv. Overestimates Switching to New, Paid Subscriptions

297. Another key error in Professor Zauberman's survey is that rather than simply asking survey respondents what services they subscribed to, he instead asked respondents which music-listening options they used in the past 30 days. *See* 8/24/20 Tr. at 3444:23-3445:20 (Leonard); Leonard CWRT ¶ 18; Hauser WRT ¶¶ 6, 20-27; Zauberman WDT App. D, Q1; 8/27/20 Tr. 4237:12-4239:1 (Zauberman) (admitting that he could have instead asked whether respondents have a subscription). The responses then dictated the options they were shown in the switching question. *See* Hauser WRT ¶ 21; Zauberman WDT App. D, Q2. If a respondent said she had listened to an existing paid on-demand streaming service in the last thirty days, for example, she was then presented with the option to switch to her existing paid-on demand streaming service. If, however, she said she had not listened to a paid on-demand streaming service in the last thirty days, she was only presented with the option to subscribe to a new paid on-demand service. *Id.*

298. This survey design is problematic for several reasons. As Professor Zauberman conceded, his survey cannot distinguish between a respondent who did not have an existing paid subscription and a respondent who had an existing paid subscription but did not use it in the past

thirty days. 8/27/20 Tr. 4235:10-17; *see also* Hauser WRT ¶ 22; Leonard CWRT ¶ 18. And, as highlighted by Dr. Leonard, it is not uncommon for consumers to have inactive paid subscriptions. *See* Leonard CWRT ¶ 18; *see also* 9/3/20 Tr. 5732:6-17 (Harrison) (explaining how users who bill subscriptions through a credit card might have a service for months without realizing they were still a subscriber).

299. Professor Zauberman further admitted that his survey cannot distinguish between a respondent who did not have an existing paid subscription and a respondent who had an existing paid subscription but did not *remember* using it in the past thirty days. 8/27/20 Tr. 4235:18-24. And as Professor Hauser explained, both academic research and his own survey pretest indicate that thirty days is too long for respondents to remember their own listening behavior accurately. Hauser WRT ¶¶ 24-26; *see also* 8/27/20 Tr. 4360:1-9. This inability to distinguish between respondents who did not have an existing paid subscription, or who had one but did not use it or remember using it in the past thirty days, likely resulted in an upward bias in estimated switching to new, paid subscriptions. Hauser WRT ¶ 27.

v. Professor Zauberman Did Not Allow Respondents To Make Distinctions Between Listening to New Versus Owned CDs, Vinyl Records, and Digital Files

300. In addition, as he conceded during the hearing, Professor Zauberman failed to allow respondents to distinguish between listening to CDs, vinyl, or digital music files they owned already and listening to CDs, vinyl, or digital files they would purchase. 8/27/20 Tr. 4239:18-4242:4; *see also* 8/6/20 Tr. 843:20-847:12 (Willig); 8/24/20 Tr. 3445:21-3446:4 (Leonard); Leonard CWRT ¶ 22; Hauser WRT ¶¶ 44-48.; Zauberman CWDT App. D, Q2. Professor Zauberman admitted that a respondent who, for example, had a large collection of downloads or CDs in the attic would have no way of indicating that she would listen to her

existing collection, rather than purchasing new CDs. 8/27/20 Tr. 4240:11-21. Indeed, Professor Willig described the effect of this on the Zauberman Survey results as an "inaccuracy." 8/6/20 Tr. 843:20-847:12. Professor Zauberman formulated his switching option this way despite recognizing the importance of being able to distinguish between "the stock and the flow of these physical and download alternatives" as a "judgment call" "given what [he] was trying to get out of [his survey]." 8/27/20 Tr. 4240:22-4242:4.[42]

vi. Professor Zauberman Failed To Use Attention Checks

301. Lastly, Professor Zauberman committed a fundamental error by failing to include attention checks to confirm respondents were sufficiently engaged in the survey and were providing reliable responses. *See* Hauser WRT ¶¶ 31-34. Professor Hauser explained that attention checks represent best practices in survey research and not including them could have exacerbated the above-discussed flaws in the Zauberman survey. *Id.* ¶¶ 8, 31-32; 8/27/20 Tr. 4334:16-4335:1; *cf.* 8/27/20 Tr. 4203:10-4204:18 (Zauberman) (explaining that he has included attention checks in prior surveys and could have done so here). While Professor Zauberman claims he was able to identify people not paying attention by eliminating "speeders" who go through the survey quickly and straight line their answers, Professor Hauser testified that this is not sufficient to ensure respondents paid sufficient attention and read the instructions carefully. Hauser WRT ¶ 31; *see, e.g.*, 8/27/20 Tr. 4207:17-19 (Zauberman).

* * *

302. All of the above flaws render the Zauberman survey unreliable and unusable. The survey overestimates switching to new, paid subscriptions and cannot be used to estimate the

[42] Both the Hauser and Hanssens surveys and industry data suggest that far more people would listen to existing collections than purchase new CDs or digital music files; Professor Zauberman's survey likely would have demonstrated the same if he had given respondents the opportunity to make this distinction. *See* Hauser WRT ¶¶ 47-48 (citing Hanssens WDT Tables 4 & 8); Leonard CWRT ¶ 19; 8/24/20 Tr. 3448:8-23 (Leonard); TXs 2037, 2038, and 2041 at 6 (showing declining sales and use of CDs and digital downloads).

diversion ratios of simulcast or custom radio listeners. *See, e.g.*, 8/27/20 Tr. 4363:23-4365:6 (Hauser); Hauser WRT ¶¶ 5-12, 20-58; 8/24/20 Tr. 3444:18-3448:25 (Leonard).

E. Professor Tucker's Ability-To-Pay Analysis is Irrelevant to the Willing Buyer/Willing Seller Rate Standard and Unsupported By Empirical Analysis

303. SoundExchange expert Professor Catherine Tucker's lengthy analysis in her written direct testimony of Pandora and iHeart being "well positioned" to pay higher royalties is, by her own admission, completely untethered to the applicable statutory standard and to SoundExchange's rate proposal, and relies exclusively on generalized trends that lack any empirical grounding in Pandora's and iHeart's actual finances. 8/17/20 Tr. 2336:13-22; *id.* at 2338:9-14, 2339:3-13, 2345:22-2346:3, 2347:25-2348:4 (Tucker) (repeatedly conceding she is not opining on the rates that should be set in this proceeding).

304. Professor Tucker's analysis also stands in stark contradiction to the CRB's rejection of similar ability-to-pay arguments in prior webcasting proceedings. *See Web IV*, 81 Fed. Reg. at 26318 ("The *Web III* Judges rejected the Live365 attempt to base rates on a service's ability to pay. Instead the Judges derived the commercial webcasting rate in *Web III* from a review of market benchmarks . . . ."); *see also Web II*, 72 Fed. Reg. at 24088 n.8 (rejecting the ability to pay argument as it "would involve the Copyright Royalty Judges in making a policy decision rather than applying the willing buyer/willing seller standard of the Copyright Act").

i. Professor Tucker's Analysis is, In Her Own Words, Irrelevant to the Statutory Standard

305. As earlier noted, the statutory standard used for determining appropriate royalty rates for noninteractive webcasters is one approximating what a willing buyer/willing seller would agree to in a hypothetical marketplace devoid of a statutory license under conditions of

effective competition. 17 U.S.C. § 114(f)(1)(B). At the hearing, Professor Tucker freely admitted that her observations about Pandora, and by logical extension iHeart, being "well positioned" to pay higher royalties do not constitute an examination of the company's *willingness* to pay in conformity with the governing standard, 8/17/20 Tr. 2341:3-9, but instead, merely examine Pandora's and iHeart's *ability* to pay—a measure that, by her own admission, is "not part of" and "completely separate" from the requisite willing buyer/willing seller standard. *Id.* at 2139:9-15, 2341:19-25, 2342:25-2343:9. Put simply, Professor Tucker's testimony is concededly *wholly irrelevant* to the mandate of this proceeding—merely "useful color for non-economists" (to adopt her own phraseology). *Id.* at 2345:8-19. Although not appearing anywhere in the hundred-plus pages comprising her written testimony, Professor Tucker attempted at trial to rehabilitate the relevance of her analysis by introducing a new verbal formulation: that Pandora's and iHeart's alleged ability to pay, even if not intended to reveal what willing buyers and sellers would agree to, would at least not constitute a "constraint" (or "ceiling") on whatever rate the Judges might set (as might be the case, for example, with a "life-saving drug" where a user might be willing to pay more than he or she is able). *See* 8/17/20 Tr. 2095:7-25, 2139:9-25; 2340:20-22, 2343:3-9. However, Professor Tucker failed to offer any empirical analysis that could possibly ground or support that new and incredibly broad assertion.

306. Moreover, Professor Tucker conceded at the hearing that she was *not* opining on whether commercial webcasters like Pandora and iHeart could or could not pay any particular rate, *id.* at 2336:13-22; was *not* identifying a particular rate Pandora (or iHeart) was or was not "well positioned" to pay, or one that would in fact act as a "constraint" on Pandora's (or iHeart's) ability to pay, *id.* at 2336:23-2337:2, 2338:9-14, 2340:4-11; had *not* actually analyzed how SoundExchange's specific rate proposal, if adopted, would affect Pandora's (or iHeart's)

finances (*e.g.*, its EBITDA or other measures of profitability), *id.* at 2337:11-13, 2339:3-24; and does *not* contend that the statutory royalty rates should actually increase (as SoundExchange here proposes) based on Pandora's alleged increased ability to pay, *id.* at 2345:22-2346:2. She also completely ignored the other party to the willing-buyer, willing-seller hypothetical negotiation—the record labels, which have enjoyed considerable financial success over the last five years due to the increased popularity of streaming services. 8/18/20 Tr. 2437:19-2438:14; Leonard CWRT ¶ 86; TXs 2052, 2054, 5075 (Warner, Sony, and UMG financials).

307. Consistent with this testimony, Professor Tucker did not make any rate recommendation *at all* for the Judges to consider. 8/17/20 Tr. 2336:13-16. And, absent any empirical analysis of Pandora's or iHeart's ability (or inability) to pay any of the specific rate proposals offered by the Participants, Professor Tucker's testimony boils down to the unfounded and ultimately useless assertion that Pandora or iHeart is unconstrained by its ability to pay *any* royalty rate whatsoever—a contention underscoring that Pandora's or iHeart's ability to pay is completely irrelevant and unhelpful to the Judges' rate consideration.

308. Additionally, even if the topic of ability to pay had some relevance in this proceeding, Professor Tucker's analysis would still be of little use because she takes a narrow view of the industry. Although there are several thousand commercial webcasters that rely on the statutory license, Orszag WDT ¶ 42, Professor Tucker's analysis extends only to Pandora and iHeart. Tucker WDT ¶ 87. And, at trial, Professor Tucker admitted that she has "not taken a position as to whether it would be appropriate for the Judges to treat the characteristics of Pandora or iHeart as representative of the entire statutory streaming industry when setting rates." 8/18/20 Tr. 2452:7-20.

309. Moreover, Professor Tucker admitted that, although her analysis heavily focused on the ability of Pandora to monetize its content, she did not perform a quantitative analysis of any sort to compare Pandora's monetization levels with those of other statutory services. *Id*. at 2454:18-2455:7. Similarly, Professor Tucker admitted that she did not compare iHeart's monetization levels with any other statutory webcaster. *Id*. at 2455:20-2456:21. What is more, Professor Tucker explained that some portion of the economic factors discussed in her testimony regarding the ability of Pandora and iHeart to pay higher rates were specific to those two entities and would not be applicable to other webcasters, including the financial implications of Pandora's acquisition by Sirius and iHeart's "emergence from bankruptcy." *Id*. at 2456:22-2457:6.

ii. Professor Tucker's Analysis Lacks Empirical Support

310. Assuming, *arguendo,* that Professor Tucker's analyses were somehow relevant to this proceeding, they are nonetheless without merit. Professor Tucker makes sweeping claims that Pandora and iHeart are well positioned to pay higher royalty rates due to "ongoing technological changes affecting the digital music industry," Tucker WDT ¶¶ 9, 11, 87, but she makes no attempt to actually *quantify* the trends she discusses, *i.e.*, to show what specific cost savings or increased profitability Pandora and iHeart have enjoyed as a result of any of them since the *Web IV* determination.

311. For instance, Professor Tucker argues that the diminishing costs of cloud computing and data storage have allowed music services to better track their users and provide them with personalized options and therefore improve their services. Tucker WDT ¶ 25; 8/17/20 Tr. 2356:4-9. However, she offers no empirical analysis of whether Pandora specifically has benefitted financially from such increased tracking capability or improved personalization

technology, or from decreases in data storage or data analytics costs—as would be required to actually demonstrate an ability to pay increased royalties.[43] At the hearing, she conceded that her testimony "does not present or analyze Pandora's actual data storage or processing costs," 8/17/20 Tr. 2356:10-13, or "provide some kind of aggregate approximation," *id.* 2356:18-25, nor does it "show what portion of increases [in ad revenue] are attributable to data storage and processing costs," *id.* 2358:2-8, or provide "some kind of causal link." *Id.* 2358:13-16.

312. In fact, as Jason Ryan testified, Pandora's combined on-premises and cloud infrastructure costs have actually [redacted] to a forecast of [redacted]. Ryan WRT ¶ 55. As Mr. Ryan testified at the hearing, while the cloud offers attractive capabilities, it is expected to remain [redacted], to store data on the cloud than on premises. 8/31/20 Tr. 4723:1-8.

313. Similarly, Professor Tucker discusses at length the industry shift to programmatic advertising, which she claims obviates the need for "separate and protracted manual negotiations" and "the expensive salesforces that would otherwise be needed to sell advertising inventory." Tucker WDT ¶ 50. However, she has not analyzed the actual costs to Pandora or iHeart of making the change to programmatic advertising and whether her broad statements are true. 8/17/20 Tr. 2359:13-17 (admitting that she has "not looked at the cost of bringing in this data revolution" in advertising, or tied any of Pandora's revenues to it); *id.* at 2192:15-2193:15 (discussing surface-level points regarding iHeart's attempts to "revolutionize" its ad business without tying it to specific revenue figures for *advertising* performance).

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[43] As discussed in NAB's Proposed Findings of Fact and Conclusions of Law, Dr. Tucker's analysis ignores altogether the economics of simulcasters, to which her analyses regarding tracking capability and personalization technology have no applicability. NAB PFFCL ¶¶ 200-202.

314. By comparison, Mr. Ryan testified that advertising costs to Pandora are still large despite the shift to programmatic advertising, and substantial negotiation with buyers, client services, and overhead costs persist. Ryan WRT ¶ 57. That this technological innovation would, on its own, allow Pandora to dramatically increase its ad sales is, in Mr. Ryan's view, a gross oversimplification and misunderstanding of Pandora's approach to advertising. *Id.* Pandora has for many years been the most sophisticated and successful service at advertising optimization in the industry, with its ad inventory effectively sold out during the majority of the year. *Id.* Given that reality, Mr. Ryan explained that technological advancement does nothing to ameliorate Pandora's primary advertising-related impediment: a lack of inventory for additional ads due to [redacted] *Id.*

315. Professor Tucker also argues that enhancements in machine learning have contributed to significant improvements in the ability of digital firms to provide individually personalized products and features. Tucker WDT ¶¶ 34-35 (claiming as a result "firms have witnessed significant declines in the costs of prediction"). She fails, however, to analyze how this digital trend has impacted iHeart (or other simulcasters) in particular. Professor Tucker conceded during the hearing that while other digital companies, including on-demand services, may rely on such improvements, simulcast programming does not. 8/18/20 Tr. 2432:10-2432:17 (admitting that machine learning does not apply to programming content on simulcast but may apply when servicing advertisements). Irrespective of how improvements to machine learning may or may not benefit different digital firms, Professor Tucker did not conduct any analysis of how this trend has resulted in cost savings or increased profitability enjoyed by iHeart.

316. Those are merely a few examples where Professor Tucker has concededly failed to quantify in any meaningful or useful way how the trends discussed in her written direct

testimony have actually impacted Pandora's or iHeart's cost structure—or bottom line—in a way that might actually demonstrate an increased ability to pay. Careful review of her written testimony, however, shows that she has not quantified *any* of the trends she discusses. In addition to the trends discussed above (improved tracking capabilities, improvements in machine learning technologies, lower data storage costs, the rise of programmatic advertising), Professor Tucker's written direct testimony discussed the rise of smart devices, *id.* ¶¶ 42-45, self-service advertising platforms, *id.* ¶¶ 51-52, increased funneling to subscription tiers, *id.* ¶ 73, and participants' increasing integration into larger business ecosystems, *id.* ¶ 75. For none of those did she demonstrate how, specifically, Pandora or iHeart has benefitted from any of these trends or how its costs or profitability has been affected as a result. Even more striking, Professor Tucker's discussion of the rise of smart devices, *id.* ¶¶ 42-45, is not even tied *theoretically* to improved financial performance, let alone to Pandora or iHeart *specifically*; in the same vein, though Professor Tucker opines that self-service advertising platforms will reduce costs, she does not describe Pandora's or iHeart's utilization of such platforms. *Id.* ¶¶ 51-52. She also admitted that she was unaware "of any non-commercial webcasters that have self-service advertising platforms" or of any noncommercial simulcasters "that offer personalized or interactive channels" or premium services at all. 8/18/20 Tr. 2479:1-16, 2480:14 (Tucker).

317. Having failed to quantify how the trends she discusses have impacted Pandora's or iHeart's finances, Professor Tucker likewise fails to demonstrate the combined effect of these changes to Pandora's and iHeart's financial health beyond what is already revealed by its actual financial statements and projections. Tucker WDT ¶ 9; 8/17/20 2361:9-23; 8/18 Tr. 2437:9-18. Put another way, she has not performed an analysis of the "unit economics" or "lifetime value" of either a Pandora or iHeart customer—the supposed touchstones of her analysis—that would

synthesize the value of the economic trends she discusses on the consumer level and demonstrate an actual increased ability to pay. 8/17/20 Tr. 2135:9-2136:2 (explaining that unit economics "measur[es] . . . profitability at the individual customer level" and is "certainly" the best measure of a streaming service's performance.) Not only does she fail to quantify the trends she discusses, Professor Tucker does not actually argue that any of these trends, individually or collectively, actually justifies a rate increase. 8/17/20 Tr. 2347:25-2348:6 ("Q. And by not putting it into the willingness to pay analysis, you're not opining that the statutory rate here should go up on account of those factors, correct? A. No. As I said before, Dr. Willig formed a willingness to pay analysis and used that to propose a rate. And that's not what I'm doing here."). Again, such an admission renders her testimony essentially useless for rate setting.

iii. Professor Tucker Exaggerates Pandora's Financial Success

318. Where Professor Tucker does get specific it is simply by pointing to Pandora's financial statements that are already separately on the record. Professor Tucker asserts that "Pandora is now generating positive adjusted EBITDA and it expects these gains to continue," Tucker WDT ¶ 91, and expects the same for gross profits, *id.* ¶ 93, but she distorts the magnitude and stability of these trends. Pandora generated only a [redacted]. Ryan WRT ¶ 45. Moreover, Pandora's profitability (pre-pandemic) was expected to [redacted] in 20, with a [redacted] *Id.* The gross margin percentage was actually [redacted]. *Id.*

319. Current financial data [redacted], indicating that the most important metric through which to evaluate Pandora's financial health, [redacted]. 8/31/20 Tr. 4740:15-4741:8

(Ryan). Even the least optimistic earlier projections [redacted]. *Id.* at 4744:23-4475:15; *see also id.* at 4721:13-4722:9 ([redacted]).

320. Additionally, the [redacted] in Pandora's [redacted]. Ryan WRT ¶ 46. As Mr. Ryan explained in his written testimony, it is illogical and unfair to raise Pandora's music royalty rates not because of any increased ability to realize profits from the service itself (which as noted would be irrelevant to the analysis), but, even more attenuated, because it has fortuitously been acquired by a wealthy parent company. Unsurprisingly, Professor Tucker clarified that acquisition by Sirius XM and its effects on Pandora, such as improved cross-selling opportunities, do not justify a higher statutory rate, neutralizing her argument. 8/17/20 Tr. 2347:11-2348:6.

321. Similarly, [redacted]. Ryan WRT ¶ 48. If those revenues were removed from the LRS projections, EBITDA [redacted] Again, as Mr. Ryan testified, that Pandora's financial health has [redacted] on account of

[redacted] seems hardly a justification for increasing royalty rates on licensed music. *Id.* ¶ 49.

322. Professor Tucker's claims of increased EBITDA supporting Pandora's purported "ability to pay" are further undercut by the fact that SoundExchange's rate proposal would "[redacted]." Ryan WRT ¶ 50. As Mr. Ryan demonstrated, if SoundExchange's proposal were adopted, Pandora's EBITDA would be [redacted] *Id.* ¶ 52. In other words, adopting SoundExchange's rate proposal would have [redacted] for Pandora. *Id.* In the end, however, Professor Tucker's claims that Pandora's positive EBITDA would support its ability to pay are once again rendered irrelevant by her admission that Pandora's [redacted] does not actually *justify* a higher royalty rate. 8/17/20 Tr. 2346:12-15.

323. Remarkably, notwithstanding these financial challenges, Professor Tucker suggests the biggest risk involved in rate-setting is that the Judges may set rates too *low,* thereby inhibiting the incentive for services to convert users to the more profitable upper tiers of service. Tucker WDT ¶ 62; 8/17/20 Tr. 2352:20-2353:4. But the suggestion that this requires a rate increase (or prohibits a decrease) finds no support in the record. In fact, Professor Tucker's analysis indicates just the opposite, noting that Pandora's ad-supported noninteractive service (which has been operating at the current rates since 2015) already represents a "way to grow paid users" and "drive people to their on-demand" service. Tucker WDT ¶ 106. Professor Tucker also acknowledged that, at the current royalty rate, the growth of Pandora's upper tiers has been "high," 8/17/20 Tr. 2355:19, incentives to convert users to more profitable subscription tiers remain in place, *id.* at 2353:5-11, "the ability to convert customers . . . to a paid subscription is

promising for Pandora's financial prospects going forward," Tucker WDT ¶ 104, and she has no evidence that current royalty rates are standing in the way of conversion or any particular rate at which they would do so. 8/17/20 Tr. 2354:4-17. Professor Tucker's argument also has no application to the thousands of simulcasters that do not operate subscription services and ignores that a lower rate for simulcasters could have a beneficial effect of encouraging simulcasters to promote additional simulcast listening in lieu of royalty-free listening to their terrestrial radio signals. 8/24/20 Tr. 3403:21-3406:18 (Leonard); *see also* 8/27/20 Tr. 4458:23-4459:14 (Newberry); Wheeler CWDT ¶¶ 29-30.

iv. Professor Tucker Overstates iHeart's Financial Performance and Conflates Digital Versus Simulcast Growth

324. In arguing that iHeart is well positioned to pay higher royalty rates for 2021-2025, Professor Tucker bases the bulk of her analysis on optimistic projections in the context of a company that only came out of bankruptcy a year ago. 8/18/20 Tr. 2437:9-18; Tucker WDT ¶¶ 148-49, 153, 160-61; *see also* 8/17/20 Tr. 2137:6-2138:22.

325. The projections she relies on include internal iHeart projections, as well as pre-pandemic projections from industry analysts such as JP Morgan, Morgan Stanley and BWS Financial. Tucker WDT ¶¶ 148, 149. However, she admittedly makes no effort to consider, as Judge Strickler put it, the "professional track record" of such projections, even in the best of times. 8/17/20 Tr. 2137:19-2138:22 (admitting this level of detail and diligence is not something she has "thought much about"). Despite this, Professor Tucker's assessment of iHeart's financial performance, and consequently its ability to pay more in statutory royalties, is based, in part, on projections she made no effort to properly vet. 8/18/20 Tr. 2435:2-6; *see also* 8/17/20 Tr. 2137:19-2138:22.

326. Indeed, iHeart's actual historical financials paint a very different picture. As Professor Tucker admitted during the hearing, iHeart's actual revenues have remained "static" with a "miniscule percentage shift" since 2016, at the time of the last Webcasting proceeding. 8/18/20 Tr. 2435:9-2436:14 (admitting iHeart actually made less revenue in 2017 than it did in 2016); *see* Tucker WDT App. 14. Professor Tucker focuses instead on the fact that iHeart's narrower *digital* business is experiencing rapid growth. Tucker WDT ¶¶ 146-147; 8/17/20 Tr. 2180:23-2181:11. That claim suffers from two flaws. First, Professor Tucker largely relies on *projected future growth* in iHeart's business, as opposed to actual performance. *See, e.g.*, Tucker WDT App. 15 (reporting a single year of actual figures in 2017 and estimated figures for 2018-2022); 8/17/20 Tr. 2180:23-2181:11. And what limited historical data she does rely on reports some growth in *all* of iHeart's digital business—including "streaming, subscription, display advertisements, podcasting, and other content that is disseminated over digital platforms"—and not just the simulcasting and custom radio services for which the Judges are setting a rate here. *See, e.g.*, Tucker WDT ¶ 146. Indeed, the one year of actual data relied upon by Dr. Tucker corresponded with the launch of iHeart's subscription on-demand service, and iHeart's projections show that the vast majority of growth will come from digital business *other than* the simulcast and custom radio services. *See* TX 5480 (5 year projections financials); Tucker WDT ¶ 151; 8/17/20 Tr. 2191:22-2192:2 (Tucker).

327. During the hearing, Professor Tucker also argued simulcast "is on the rise." 8/18/20 Tr. 2433:13-2434:13. But none of the sources she relied on suggested that *revenue* for simulcasting is on the rise. *See* Leonard CWRT ¶ 85. To the contrary, Tucker admitted that the only evidence of revenues she addressed at trial encompassed revenues for iHeart's subscription on-demand services, podcasts, and other digital revenues aside from streaming. 8/18/20 Tr.

2433:13-2434:13; Tucker WDT ¶ 149 & n.295.[44] Last, Professor Tucker claims that iHeart is now well positioned to pay higher royalty rates simply because it recently emerged from bankruptcy with a reduced debt load. Tucker WDT ¶¶ 142-150; 8/18/20 Tr. 2436:15-19. She argues that due to its reduced debt and subsequent return to the public markets in 2019, iHeart is in a position to "perform well" financially. Tucker WDT ¶¶ 143-144; 8/17/20 Tr. 2180:2-6. Putting aside that the implication of Professor Tucker's argument is at odds with the plan that allowed iHeart to emerge from bankruptcy—she would have iHeart replace debt burden with royalty burden—her superficial assessment is not even based on a review of iHeart's actual restructuring plan or financial portfolio post emergence from bankruptcy. *See* Tucker WDT ¶¶ 142-150. In any event, Professor Tucker admitted on the stand that she has no special expertise in the financial analysis of companies emerging from bankruptcy and the factors that make for successful emergence and growth post-bankruptcy. 8/18/20 Tr. 2436:20-2437:8. Instead, Professor Tucker relies yet again on general pre-pandemic third-party projections that claim iHeart's financial health post-restructuring is "optimistic." Tucker WDT ¶¶ 148-149.

III. <u>THE SERVICES' PROPOSED TERMS SHOULD BE ADOPTED, AND SOUNDEXCHANGE'S SHOULD BE REJECTED</u>

A. <u>Audit Terms</u>

i. Interest Rate for Underpayments

328. Sirius XM, Pandora, NAB, Google, and the NRBNMLC propose that the Judges adopt the interest rate set more recently in *SDARS III* for audit underpayments, which is the standard interest rate applied to federal court judgments.[45] The interest rate applied to federal

[44] Moreover, Professor Tucker fails to conduct any analysis of this alleged growth for non-iHeart webcasters. *See* 8/17/20 Tr. 2140:6-9.

[45] *See* Second Amended Proposed Rates and Terms of Sirius XM Radio Inc. and Pandora Media, LLC (Oct. 7, 2020) at 2; NAB WDT Vol. 1, Tab B ("NAB Proposed Rates and Terms") at 6; Google WDT Vol. 1, Tab 2 ("Google

court judgments adopted in *SDARS III* already reflects Congress's judgment about what is necessary to fully compensate copyright owners from any losses related to underpayment of royalties. *See* 28 U.S.C. § 1961; *see Frank Music Corp. v. Metro-Goldwyn-Mayer, Inc.*, 886 F.2d 1545, 1552-1553 & n.12 (9th Cir. 1989) (explaining that "[f]or the restitutionary purpose . . . to be served fully, the defendant generally should be required to turn over to the plaintiff not only the profits made from the use of his property, but also the interest on these profits," and applying the rate in § 1961 to prejudgment interest).

329. The Judges should reject SoundExchange's proposal, which asks the Judges to maintain the existing interest rate of 1.5% per month for underpayments discovered in the course of an audit, as set forth in 37 § C.F.R. 380.6(g). *See* Ploeger WRT App. A (Bender WDT) ¶¶ 107-111. The services' proposal better aligns with the statutory scheme and its logical underpinnings. The existing rate of 1.5% per month (or 18% per year) borrows from a separate regulatory penalty for *late* payments, and it is inappropriate as an interest fee on an audit underpayment. *See* 37 C.F.R. § 380.6(g) (calling for underpayment interest at the rate specified in § 380.2(d) ("Late fees")); Williams CWDT ¶ 43; Barry WRT ¶ 24; Pifer WRT ¶ 7. Just as the Judges found in *SDARS III*, "the more punitive 1.5% per month rate" is not appropriate given that audits often "uncover good faith errors." *SDARS III,* 83 Fed. Reg. at 65210, 65262. The abject failure to make timely payments is simply not analogous to underpayments made in good faith and on a timely basis, but which are later discovered to be deficient in an audit several years later. *Id.* Underpayments discovered in an audit, unlike late payments, are likely to stem from some sort of inadvertent calculation or technical error in performance counts, not by a known

LLC's Proposed Rates and Terms"); The NRBNMLC's Amended Proposed Rates and Terms Ex. A at 6 (July 31, 2020) ("NRBNMLC Rate Proposal"); Barry WRT ¶ 24: Pifer WRT ¶¶ 6, 12; Ritz WDT ¶¶ 41-42; Williams CWDT ¶ 43.

failure to comply with obligations or "outright fraud" as unjustifiably claimed by Mr. Ploeger. Ploeger ¶ 60; Witz WDT ¶ 46; Williams CWDT ¶ 43; Pifer WRT ¶ 8.

330. Viewed in its original context, the 1.5% monthly interest rate plainly serves as a short-term penalty to incentivize timely payment, escalating only due to the continued negligence or malfeasance of the payor, a fair result that logically balances incentives. Barry WRT ¶ 24; Pifer WRT ¶ 8. By contrast, the continuing and staggering accrual of so much interest in the audit context would unfairly capitalize on time spent believing, reasonably and in good faith, that all of the payor's obligations had been fulfilled. *Id.* This interest rate is so outrageously high that, by example, out of several *thousand* contracts entered into by Sirius XM and Pandora that relate to audit findings, such an interest rate exists in less than *ten* of them. 8/31/20 Tr. 4525:12-16, 4530:1-7 (Barry).

331. The unfairness of applying the late-fee interest rate to audit underpayments is exacerbated by the typical length of an audit. Witz ¶ 47; Pifer WRT ¶¶ 10-11. Because SoundExchange often audits three-year periods and has until December of the following year to notice the audit, Sirius XM and Pandora may already be four years removed from the first month of the audit period before they can even start the audit—and thus already at 72% interest rate for any underpayment discovered from that time period. Witz ¶ 47; *see also, e.g.*, Pifer WRT ¶¶ 9-10 ([redacted]). This is an absurd and usurious result, as the amount of interest due would rival the principal owed (even with edits to the regulations limiting the duration of the audit or hastening fieldwork and information sharing). Barry WRT ¶ 24; *see also* Pifer WRT ¶ 10.

332. Mr. Bender's completely unfounded speculation that the services' proposal "would amplify the statutory license's moral hazard by providing very cheap borrowing for webcasters that have their underpayments discovered" should be afforded no weight. Ploeger WRT App. A (Bender WDT) ¶ 110; Barry WRT ¶ 25. Not only does Mr. Bender groundlessly attribute duplicitous behavior to statutory webcasters, but he also ignores the logical converse of this accusation: an 18% annual interest rate encourages SoundExchange to *delay* audits and their resolution, in the hope of capitalizing on the prime investment opportunity that is underpayment interest. Barry WRT ¶ 25. There is no evidence that either SoundExchange or the webcasters run their businesses that way. To the contrary, Joe Ritz, Vice President of Finance and Digital Networks at iHeart, explained that iHeart "has strong business incentives to ensure royalty payments are timely and accurate" in order to maintain its close and important relationships with artists, who ultimately receive the royalties, and its direct deal partners, for which iHeart uses the same systems to track performances. Ritz WDT ¶¶ 7-8, 41-42. The Judges should therefore accept the services' proposal to use the post-judgment interest rate, as they did in *SDARS III*.

ii. Credit for Overpayment

333. Sirius XM and Pandora propose that 37 C.F.R. § 380.6(g), or § 380.7(g) as renumbered by SoundExchange, be modified to provide, *inter alia*:

> If the auditor determines the payor or distributor overpaid royalties, ~~however, the verifying entity shall not be required to remit the amount of any overpayment to the payor or distributor, and~~ the payor or distributor shall ~~not seek by any means to recoup, offset, or~~ be entitled to take a credit ~~for~~ against its next scheduled payment in the amount of the overpayment, ~~unless the payor or distributor and the verifying entity have agreed otherwise~~.

Second Amended Proposed Rates and Terms of Sirius XM Radio, Inc. and Pandora Media, LLC at 2.

334. NAB and the NRBNMLC have proposed a nearly identical change to sub-paragraph (g) of Section 380.6:

> If the auditor determines the payor or distributor overpaid royalties, the Licensee may deduct the amount of overpayment from its next payment(s) due to the Collective until the full amount of the overpayment has been recouped ~~however, the verifying entity shall not be required to remit the amount of any overpayment to the payor or distributor, and the payor or distributor shall not seek by any means to recoup, offset, or take a credit for the overpayment, unless the payor or distributor and the verifying entity have agreed otherwise~~.

NAB Proposed Rates and Terms at 6; NRBNMLC Rate Proposal Ex. A at 6.

335. For all practical purposes, these two proposals would achieve the same effect of allowing licensees to recoup overpayments without permission from Sound Exchange. Google supports these proposals as well. This is a matter of basic fairness: if the services can be liable for underpayments (with significant interest), then they should also be able to recover any *over*payments. Sirius XM, Pandora, NAB, and the and the NRBNMLC's proposal is in line with regulations issued by the Copyright Office related to the audit of statements of account under the section 111 statutory license, which allow such recoupment if an audit finds an overpayment. Williams CWDT ¶ 41.

336. While SoundExchange argues that discovery of overpayments is a rare occurrence, Ploeger WRT ¶ 66, this is not a persuasive reason for rejecting this proposal.

337. SoundExchange also claims that it would have difficulty recovering overpayments because SoundExchange does not "hold statutory royalties in reserve against the possibility of refunding or crediting them to licensees." Ploeger WRT ¶ 69. There is no practical basis, however, for rejecting a requirement for SoundExchange to reserve funds to refund overpayments. SoundExchange has not explained, for instance, why it could not simply

pay overpayments out of its unclaimed funds pool. *See id.* ¶ 82 (asserting that "undistributable royalties paid to a collective under a statutory license . . . are to be used for the federal purposes of the statutory license").

338. Indeed, the new collective that is administering the statutory license for mechanical rights is required, in the case of an overpayment of royalties, to "appropriately credit or offset the excess payment amount and apply it to the blanket licensee's account, or upon request, issue a refund within a reasonable period of time." 37 C.F.R. § 210.27(k)(5). There is no reason to conclude that SoundExchange cannot refund overpayments when the Mechanical Licensing Collective can.

iii. Net Underpayment for Reasonable Costs

339. Under the current terms of the statutory license, a licensee must bear the reasonable costs of the audit if the auditor determines that there was an underpayment of 10% or more. 37 C.F.R. § 380.6(h). NAB and the NRBNMLC seek to clarify that the underpayment must be a "*net* underpayment (*i.e*. underpayments less any overpayments) of 10% or more" before the licensee must pay for the audit costs. NAB Proposed Rates and Terms at 6 (emphasis added); NRBNMLC Rate Proposal Ex. A at 6. Mr. Williams explained that this change would "better reflect the practices in the marketplace." Williams CWDT ¶ 42. The other services support this proposal, and SoundExchange does not oppose this proposal.

iv. Response Times

340. In section 380.7(d) of its proposed regulations (as renumbered by SoundExchange), SoundExchange asks the Judges to impose strict deadlines for responding to field-work and information requests from auditors:

> *The audit*. The audit must be conducted during regular business hours by a Qualified Auditor who is not retained on a contingency

> fee basis and is identified in the notice. If the auditor sends the Payor a written request to conduct field work for the audit, the Payor must endeavor to schedule such field work for a date or dates within 30 days after the date of the request, and in any event must schedule such field work for a date or dates within 60 days after the date of the request. If the auditor sends the Payor a written request for information reasonably related to the audit, the Payor must promptly respond to the auditor if the Payor does not believe that the request is reasonable, in which case the Payor and auditor must promptly endeavor to agree concerning the provision of reasonable information responsive to the auditor's reasonable purpose for seeking the information. The Payor must provide the auditor reasonable information responsive to the auditor's reasonable purpose for seeking additional information within 60 days after the date of the request.

Barry WRT ¶ 7 (citing Proposed Rates and Terms of SoundExchange, Inc. and Artist and Copyright Owner Participants (Sept. 23, 2019) ("SX Proposal") at 18-19).

341. Sirius XM, Pandora, and NAB instead propose a much more effective solution (which Google and the NRBNMLC support as well), which is simply to require that audits be completed within one year of being noticed. Barry WRT ¶ 16. Under this alternative proposal, 37 C.F.R. § 380.6(b), or 37 C.F.R. § 380.7(b) as renumbered by SoundExchange, would be amended as follows:

> Frequency of auditing. The verifying entity may conduct an audit of each licensee only once a year for any or all of the prior three calendar years. The auditor must complete its fieldwork and deliver its written report within 10 months of the date that the verifying entity notices the audit, and the Payor must respond to the written report in writing within one year of such notice. A verifying entity may not audit records for any calendar year more than once.

Barry WRT ¶ 16. A one-year timeframe for the audit as a whole would encourage diligence and responsiveness by both the Payor and the auditor, avoid needless micromanagement, and provide needed flexibility for responding to information requests. *Id.* And, as noted above, it would help limit the amount of interest that accrues on alleged underpayments when audits drag on.

342. Sirius XM, Pandora, and NAB's proposal better accounts for the practical difficulties involved in the audit process. Barry WRT ¶ 9. While the services fully support conducting audits efficiently and without unnecessary delays, SoundExchange's proposal to micromanage the timing of intermediate steps in the audit process is unworkable and unfair. Barry WRT ¶ 8. A hard 60-day deadline to schedule fieldwork and respond to information requests cannot account for the sometimes unavoidable delays that are not within the licensee's control. Barry WRT ¶ 9; Ritz WRT ¶ 25.

343. For instance, audits noticed near the end of a calendar year or in first-quarter "tax season" have historically been the subject of substantial delays, as the external auditors commonly have other significant demands on their time that cannot be controlled by the licensee. Barry WRT ¶ 9. To give but one recent example, Sirius XM encountered precisely these sorts of difficulties scheduling SoundExchange's current audit of the 2018 license period, in which fieldwork scheduled to take place the week before Thanksgiving had to be rescheduled to February through no fault of either party. Barry WRT ¶ 10.

344. Similarly, delays sometimes occur not simply as a result of the general obligations associated with a particular time of year, but due to the demands of the requests themselves. Barry WRT ¶ 11. For instance, when an auditor requests access to data (including metadata) that is not readily accessible on-site (such as where it has been archived with an offsite vendor or even several vendors), that request could make compliance within 60 (much less 30) days infeasible or impossible. Barry WRT ¶ 11; *see also* Ritz WRT ¶ 11. Moreover, in certain instances, a simple lack of clarity of the auditor requests can take a significant amount of time to

resolve and fulfill—delays which are exacerbated by the potential involvement of tech personnel who are not deeply familiar with the auditor's terminology. Barry WRT ¶ 11. In such situations where substantial back-and-forth is required, it would be difficult to assess when a compliance period can be said to have begun or ended. It is also not clear how the proposed deadlines would accommodate a situation where the auditor makes an initial request, the licensees asks for clarification, and the auditor does not get back to the licensee for days or even weeks. *Id.*

345. Relatedly, it has also been Sirius XM's experience that auditors, often at SoundExchange's behest, request access to documents that are well beyond the scope of what is reasonably necessary to review a licensee's payments, such as demanding copies of SXM's direct license agreements and artist waivers (which number in the hundreds) for the purpose of evaluating the strength of the legal rights granted in those agreements. *Id.* ¶ 12. In this case, and others, resolving the dispute—which was at best ancillary to the auditor's purpose—took weeks to resolve. *Id.*

346. Ultimately, the services have always attempted in good faith to timely respond to reasonable auditor requests, and SoundExchange does not assert otherwise; therefore, there is simply no need to layer in SoundExchange's proposed interim deadlines to the regulations. Barry WRT ¶ 13. Should the Judges decide that specific interim deadlines need to be set, Sirius XM proposes as an alternative to its preferred one-year proposal that scheduling field work within enumerated deadlines be reciprocal (*i.e.*, they should apply to the auditor as well as the Payor), and that it should be the auditor's responsibility to maintain a schedule detailing the specific requests that have been made, the Payor's agreement (or other response) to the request, the specific date of the Payor's response, and any period of delinquency. *Id.* ¶ 14. Sirius XM also proposes that additional time should be built into SoundExchange's proposals: the auditor

and Payor should endeavor to schedule field work within 60 days of the request, and in any event must schedule the field work within 90 days of the request. *Id.* Finally, Sirius XM proposes that the regulations more clearly provide for exceptions in instances in which the auditor seeks information that is unreasonably burdensome or not reasonably related to the audit, or where the Payor reasonably determines that completing the auditor's request within 90 days is infeasible. *Id.*

347. With such appropriate revisions, SoundExchange's proposed new text in Section 380.7(d) would instead read as follows:

> If the auditor sends the Payor a written request to conduct field work for the audit, the auditor and the Payor must endeavor to schedule such field work for a date or dates within ~~30~~ 60 days after the date of the request, and in any event must schedule such field work for a date or dates within ~~60~~ 90 days after the date of the request. If the auditor sends the Payor a specific written request for information ~~reasonably~~ related to the audit, the Payor must promptly respond to the auditor if the Payor does not believe that the ~~request is reasonable~~ requested information reasonably is necessary to verify the Payor's payments or is available without unreasonable burden, in which case the Payor and auditor must promptly endeavor to agree ~~concerning the provision of reasonable information responsive to the auditor's reasonable purpose for seeking the information~~ what information the Payor can and should reasonably provide and a schedule for the provision of such information. The Payor must provide the auditor ~~reasonable information responsive to the auditor's reasonable purpose for seeking additional information~~ the agreed-upon information within ~~60~~ 90 days after the date of the request, other than information where the Payor reasonably determines that completing an auditor's request within 90 days is infeasible, in which case the Payor shall provide the information as promptly as possible. The Auditor shall maintain a schedule detailing the specific information requests that have been made, the Payor's agreement (or other response) to the request, the specific date of the Payor's response, and any period of delinquency.

Barry WRT ¶ 15.

348. The above revisions to SoundExchange's proposal would help account for unreasonable requests and circumstances beyond the Payor's (or auditor's) control, but it is still inferior to Sirius XM's straightforward proposal that an audit be completed within one year of being noticed. *Id.* ¶ 16. Although SoundExchange argued at trial that the one-year proposal "would enable a licensee to effectively run out the clock on an audit by dragging its feet," this is no more than a theoretical "remote possibility" that could just as well happen with SoundExchange's own proposed deadlines. 8/31/20 Tr. 4524:13-25 (Barry).

v. Fee Shifting for Failure to Provide Information

349. In section 380.7(h), SoundExchange proposes new language that would shift the full cost of an audit to the Payor if the Payor fails to complete an information request by the auditor within 60 days. *See* SX Proposal at 20 (requiring Payor to "bear the reasonable costs of the audit" if the Payor "does not provide information requested by the auditor that is in the possession of the Payor or a contractor to the Payor within 60 days after the date of the auditor's written request for that information"). This proposal is patently unfair and unnecessarily punitive, and it should be rejected out of hand. Barry WRT ¶ 17; Pifer WRT ¶¶ 13, 17.

350. First, under the current regulations, delays in the audit process *already* result in the Payor paying incremental interest as the audit is performed. Therefore, an additional cost-shifting penalty would be duplicative and unnecessary, serving only to punish by exacerbating the effects of substantial penalties that are already part of the regulatory scheme. Barry WRT ¶ 18.

351. Second, SoundExchange's proposal is fundamentally unbalanced. Under SoundExchange's proposal, the responsibility for paying the cost of the *entire audit* would apparently fall on the Payor if the Payor fails to complete even a *single* information request by

the proposed 60-day deadline. *Id.* ¶ 19. Shifting the full cost of a potentially lengthy and complex audit based on a single late response, however immaterial the request, would clearly lack proportionality and fail to properly balance the incentives on both sides. *Id.*

352. The cost-shifting provision could also be subject to abuse by the party requesting an audit, as SoundExchange's proposed language lacks any requirement that the auditor's request be substantively reasonable, or reasonable to complete within 60 days. *Id.* ¶ 20; Pifer WRT ¶¶ 14-16. As drafted, it would open the door to unreasonable and intrusive demands, with which licensees would be forced to comply under penalty of paying the full cost of the audit. *Id.* This is not an abstract fear, as it is well-documented that Sirius XM and Google have in the past faced impractical and overbroad information requests that took significant time and effort to resolve. Barry WRT ¶ 20; Pifer WRT ¶ 15. Nor would this proposal be acceptable even with a "reasonableness" requirement, as the parties involved would undoubtedly become embroiled in contentious disputes concerning the reasonableness of any number of requests, especially with a substantial cost-shift penalty at stake. *Id.*

vi. Clarification of Auditor's Right to Consult

353. In section 380.7(f) of its proposed regulations, SoundExchange inserts a new sentence that purportedly would "clarify" the auditor's ability to consult with its "client," the Verifying Entity. SX Proposal at 19 ("Throughout the audit process, the auditor may consult with the Verifying Entity, including to advise it concerning the status of the audit, request information relevant to the audit, and request the Verifying Entity's views concerning tentative findings and other issues."). But SoundExchange's proposal is far from an innocuous "clarification" of the auditor's present ability to consult with the client. Rather, it directly

opposes and dramatically alters existing regulations that are designed to *prevent* close consultation between the auditor and the Verifying Entity. Barry WRT ¶ 23.

354. The governing regulations appropriately provide that the auditor be "independent," not a mere agent of SoundExchange or another Verifying Entity. 37 C.F.R. § 380.7 (defining "Qualified auditor" as an "*independent* Certified Public Accountant licensed in the jurisdiction where it seeks to conduct a verification") (emphasis added); Barry WRT ¶ 22. Moreover, the "Duty of auditor to consult," noted in the title of the current section 380.6(f), refers to the auditor's duty to consult *the Payor* (not the "client") by reviewing tentative findings with "an appropriate agent or employee of *the Payor* in order to remedy any factual errors and clarify any issues relating to the audit." 37 C.F.R. § 380.6(f) (emphasis added); *see also* Barry WRT ¶ 23.

355. Though SoundExchange's proposal is plainly incongruous with the regulations and their purpose, it tracks closely with SoundExchange's historical practices of close coordination and consultation with auditors prior to and during the course of an audit. In Sirius XM's experience, SoundExchange's auditors have failed to demonstrate the requisite independence and objectivity that is required by the American Institute of Certified Public Accountants (AICPA), whose code of conduct prohibits the "subordination" of the auditor's "judgment" to the interests of its client. Barry WRT ¶ 22; TX 5001 at 10 (AICPA Code of Professional Conduct § 0.300.050.03 ("Objectivity and Independence")). To be more specific, SoundExchange's auditors have routinely adopted SoundExchange's often dubious and overly aggressive interpretation of the governing regulations, which has resulted in their seeking burdensome and irrelevant information far afield from the legitimate purposes of payment

verification.[46] Additionally, it appears as though they look only for underpayments by the licensee that favor SoundExchange, not overpayments benefitting the licensee. Even more striking, auditors who do not find underpayments are not engaged for subsequent audits. Barry WRT ¶ 22.

356. SoundExchange's proposed language would enshrine in the regulations a *carte blanche* for SoundExchange to continue to tilt what should be a neutral, level playing field in its own favor, and it should be rejected. *Id.* ¶ 23.

B. <u>Minimum Fee</u>

357. SoundExchange has proposed to double the minimum fee applicable to commercial and noncommercial webcasters from $500 to $1,000 in a single year (and to increase concomitantly the cap on cumulative minimum fees from $50,000 to $100,000). Proposed Rates and Terms of SoundExchange, Inc. and Artist and Copyright Owner Participants (Sept. 23, 2019) at 2. SoundExchange has utterly failed to satisfy its burden to justify such a significant increase in the fees to be paid by the industry's smallest services.

i. The Purpose Of The Minimum Fee Is To Cover SoundExchange's Incremental Administrative Costs, Not Its Overall Administrative Costs

358. As an initial matter, the purpose of the minimum fee is to cover SoundExchange's *incremental administrative costs*, not its overall administrative costs.

359. As SoundExchange acknowledges, the costs of the collective are to be borne entirely by copyright owners, not by licensees. As SoundExchange itself has acknowledged, its

[46] To give just a couple of examples, SoundExchange's auditor once alleged an underpayment of royalties of nearly $70 million based on SoundExchange's ill-founded contention that Sirius XM did not recognize revenue from its performances of pre-1972 recordings. In the same audit, based on SoundExchange's contention that Sirius XM needed to pay SoundExchange for live recordings created by Sirius XM when artists visited the Sirius XM studios, the auditor demanded copies of all of Sirius XM's agreements with those artists and claimed that, as a legal matter, the agreements did not excuse Sirius XM from paying SoundExchange. Barry WRT ¶ 22 n.3.

administrative costs are funded out of royalties, rather than any additional assessment paid by licensees. *See* TX 3023 at 11 ("The costs of SoundExchange in regards to [statutory] royalties are deducted pursuant to federal law *from the royalties* collected under the statutory licenses." (emphasis added)); TX 3024 at 11 (same).

360. Indeed, while the Copyright Act specifies that the "reasonable costs" of SoundExchange "may be deducted from any of its receipts, prior to the distribution of such receipts to any person or entity entitled thereto," 17 U.S.C. § 114(g)(3),[47] there is no provision of the Act that authorizes SoundExchange to charge licensees amounts over and above royalties owed, to fund the costs of SoundExchange. This stands in contrast with the statutory scheme established by Congress under section 115, where Congress specified that the costs of the collective under that statutory license (the Mechanical Licensing Collective) are to be borne by licensees. *See* 17 U.S.C. § 115(d)(7) (specifying that the "collective total costs" must be funded by assessments and other payments made by licensees); *see also* 85 Fed. Reg. 831 (Jan. 8, 2020) (establishing the amount of the initial assessment). Thus, using the minimum fee to help fund the *overall* administrative costs of SoundExchange would run afoul of the Act.

361. Instead, the minimum fee serves a very different purpose. In *Webcasting I*, webcasters argued that the "only justification for imposing a minimum fee is to protect against a situation in which the licensee's performances are such that it costs the license administrator more to administer the license than it would receive in royalties," and that "the appropriate calibration for the minimum fee is the incremental costs to the license administrator of adding another license to the system regardless of how many performances they make." *In re The*

[47] The term "receipts" in the context of section 114 refers to *royalties* paid for use of copyrighted works. *See* 17 U.S.C. § 114(g)(2) (describing the formula for distributing "receipts from the licensing of transmissions in accordance with subsection (f)").

Matter of Rate Setting for Digital Sound Performance Right in Sound Recordings and Ephemeral Recordings (“*Webcasting I CARP Determination*”), Dkt. No. 2000-9 CARP DTRA 1&2, Report of the Copyright Arbitration Royalty Panel at 32. The Copyright Arbitration Royalty Panel “concur[red] with the [webcasters] that one purpose of the minimum fee is to protect against a situation in which the licensee’s performances are such that it costs the license administrator more to administer the license than it would receive in royalties.” *Webcasting I CARP Determination* at 95. The Librarian of Congress, in reviewing the CARP decision, agreed that the minimum fee was intended to cover “the *incremental* cost of licensing.” 67 Fed. Reg. 45,240, 45,263 (July 8, 2002) (emphasis added).[48]

362. Although later determinations have loosely referenced the minimum fee being used to “cover SoundExchange’s administrative cost,”[49] those references must be read consistently with the Copyright Act and the *Webcasting I* determination. *See* 17 U.S.C. 803(a)(1) (requiring the Judges to act “on the basis of . . . prior determinations . . . of the . . . Librarian of Congress [and] copyright arbitration royalty panels”).

ii. The Record Supports Maintaining The Current Minimum Fee of $500 As More Than Sufficient To Cover SoundExchange’s Incremental Administrative Costs

363. NAB and the NRBNMLC propose a continuation of the existing $500 minimum fee for both commercial and noncommercial webcasters. A $500 minimum fee was proposed by *both* the services and copyright owners in *Web IV*, and therefore reflected the fee that willing

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[48] The CARP also explained, and the Librarian of Congress agreed, that another “arguable purpose is to capture the intrinsic value of a service’s *access* to the full blanket license, irrespective of whether the service actually transmits any performances.” *Webcasting I CARP Determination* at 95; *see also* 67 Fed. Reg. at 45263. But SoundExchange has not attempted to justify an increase in the minimum fee based on a change in such “access value.” *See* Leonard CWRT ¶ 90 n.189.
[49] *See Web II*, 72 Fed. Reg. at 24096; *Web III*, 79 Fed. Reg. at 23124; *Web IV*, 81 Fed. Reg. at. 26396-97.

buyers and willing sellers would negotiate through 2020 based on economic conditions and costs at that time:

> The current $500 minimum fee for commercial webcasters has been in force for more than a dozen years, and has been voluntarily re-adopted by licensors and licensees on two occasions. It has been proposed by licensors and licensees in this proceeding. . . . The Judges find the proposed minimum fee (including the $50,000 cap) to be reasonable and supported by record evidence, and will therefore adopt it.

Web IV, 81 Fed. Reg. at 26397 (footnote omitted); *see also id.* (observing that $500 noncommercial minimum fee "has been proposed by SoundExchange and the NRBNMLC"); *see also* Steinberg WRT ¶ 12; 8/26/20 Tr. 4042:9-11 (Steinberg) ("We learned, and Judge Strickler asked this question of . . . Mr. Orszag, that $500 was the proposal from SoundExchange in *Web IV*."). That is strong evidence that a fee of no more than $500 was a reasonable fee through at least 2020. Steinberg WRT ¶ 12.

364. The record in this proceeding does not show any increase in SoundExchange's incremental costs since *Web IV*—and certainly not since 2020 or even 2015—that would justify any increase in the minimum fee, let alone a doubling of that fee. SoundExchange offered no such evidence, focusing its case instead on a supposed increase in its overall administrative costs, *see, e.g.*, Ploeger WRT ¶¶ 14-15; *id.* App. A (Bender WDT) ¶¶ 46-51, which standing alone is legally irrelevant to the establishment of the minimum fee.

365. In fact, if anything, the record demonstrates that SoundExchange's incremental administrative expenses have *decreased* since *Web IV*. SoundExchange witnesses touted SoundExchange's "major technology initiatives over the last several years," including its client portal "SoundExchange Direct"; its licensee portal "Licensee Direct"; its public site that allows searching of ISRCs; and its information technology platform called 'Next Gen," which "consists

of a set of six interoperating expert systems or modules supporting the various stages of the royalty collection and distribution process." Ploeger WRT App. A ¶ 9; *see also id.* ¶ 10 (observing that statements of account and reports of use "[h]istorically … were mostly sent to SoundExchange by postal mail" but now "are mostly delivered through Licensee Direct," an electronic portal); 8/11/20 Tr. 1470:22-24 (Orszag) ("[redacted].").
The electronic system processing tens of thousands of licensee submissions is overseen by a staff of only 12. Ploeger WRT App. A ¶ 11. SoundExchange itself notes that its administrative rate (its costs expressed as a percentage of receipts) was only 4%, "which is quite low relative to other performing rights organizations." Ploeger WRT ¶ 14.[50]

366. Indeed, even at current levels, the minimum fee effectively serves not to offset administrative costs, but as a source of extra royalties for copyright owners, above and beyond the statutory rate set by the Judges. During the hearing, SoundExchange's Director of License Management, Travis Ploeger, testified that, where a licensee's minimum fee payment exceeds the value of the licensee's actual performances, the payment is distributed to copyright owners as an additional royalty, over and above the royalty they had already been paid to those copyright owners for the actual usage at the statutory per-play rate, after SoundExchange deducts its percentage administrative fee. *See* 9/9/20 Tr. 5874:18-5875:21, 5876:8-5878:3 (Ploeger).

[50] Notwithstanding the fact that, as SoundExchange concedes, performing rights organizations labor under higher administrative rates, it bears noting that the ASCAP and BMI minimum fees are *lower* than the fee proposed by SX. *See* TX 2029 at 9 (ASCAP license showing a $600 minimum fee through 2021); TX 2181 at 20 (BMI license showing a $615 minimum fee through 2021). SESAC has no minimum fee. *See* TX 2146. ASCAP and BMI musical work broadcasting fees for noncommercial broadcasters are as low as $373 in 2021—and that figure is not merely a minimum fees but a flat fee covering the entirety of these entities' broadcast transmissions. 37 C.F.R. § 381.5(c)(1), (2). The SESAC fees for these entities is an even lower $162 in 2020 and will be adjusted only by a cost-of-living increase for 2021. *Id.* § 381.5(c)(3).

367. An increase in the minimum fee will, therefore, not help offset any increase in incremental costs, but instead will funnel more royalties to copyright owners. Put simply, such an increase will, in effect, be a backdoor royalty bump borne by the smallest copyright owners.

iii. Even Based on SoundExchange's Overall License Processing Costs, SoundExchange Has Failed to Justify An Increase In The Minimum Fee

368. Even assuming arguendo that SoundExchange could, as a legal matter, justify an increase in the minimum fee based on an increase in the overall cost of administering webcasting licenses, SoundExchange has failed to make that factual showing. As a basis for its proposed minimum fee increase, SoundExchange points to its calculated total per-channel administrative cost of $4,448. Ploeger WRT App. A ¶¶ 41-54. As noted above, this figure is legally irrelevant because it does not reflect SoundExchange's incremental administrative costs. But it is flawed even on its own terms, at several levels.

369. First, SoundExchange's per-channel cost calculation begins with a $55 million figure that reflects SoundExchange's 2018 "Total Operating Administrative Expenses" rather than the cost of processing and distributing royalties, specifically. *See* 9/9/20 Tr. 5860:2-5861:4, 5863:6-12, 5866:15-5874:3 (Ploeger); *see also* TX 3023 at 43; Steinberg WRT ¶ 19. As Mr. Ploeger testified at the hearing, the $55 million figure represents "the total administrative cost for everything," "it's not limited to just webcasting." 9/9/20 Tr. 5863:6-12. Indeed, Mr. Ploeger acknowledged that the figure includes many line items that he was unable to confirm reported costs associated with processing and distributing royalties, including: "Property and Equipment Depreciation" ($4,913,768); "Rate-Setting Proceedings Amortization" (which Mr. Ploeger presumed included legal fees and expert fees for rate setting proceedings) ($8,214,936); "Interest expense" ($136,004); and "Tax expense" ($212,998). *See id.* 5867:1-5874:3; TX 3023 at 43; *see*

also Steinberg WRT ¶ 19; 8/26/20 Tr. 4043:1-5 (Steinberg). Nor could Mr. Ploeger confirm whether the $55 million figure included SoundExchange's fixed costs. 9/9/20 Tr. 5873:16-5874:3 (Ploeger).

370. Second, SoundExchange's allocation of its inflated administrative expense figure of $55 million to calculate an administrative cost per channel is seriously flawed. SoundExchange derives its per-channel cost by dividing the $55 million by SoundExchange's total number of licensees, and then dividing that number by an estimate of the average number of channels per licensee. *Id.* at 5860:5-5861:4. However, SoundExchange's channels-per-licensee estimate is predicated on a problematic assumption: for services for which SoundExchange lacked information about their total number of channels, but for which it was generally aware that the service had a large number of channels, it assumed the service had 100 channels. *Id.* at 5857:18-5859:5; Ploeger WRT app. A ¶ 49. Mr. Ploeger testified that Pandora was one such station even though Pandora has more than 100 channels—it possibly has millions. 9/9/20 Tr. 5869:6-5860:1. SoundExchange's calculation thus spreads the costs of administering Pandora's millions of channels across an artificially limited subset of stations, thereby falsely inflating SoundExchange's administrative cost per channel. *See id.* 5863:15-5864:15.

iv. Inflation Cannot Justify SoundExchange's Proposed Increase

371. SoundExchange also points to the inflation rate since 1998 as a basis for its proposal. Ploeger WRT app. A ¶ 43. As noted above, incremental processing costs, rather than any other measure, is the appropriate gauge to set minimum fees. *See supra* ¶ 361. As noted above, general inflation has been counterbalanced by reductions in royalty processing costs, which renders that measure economically irrelevant to the minimum fee determination here. 8/11/20 Tr. 1470:12-1471:2 (Orszag); *supra* ¶¶ 364-67.

372. Even if inflation were an economically relevant proxy for SoundExchange's incremental processing costs, any increase to the minimum fee must be justified by changes occurring after 2020. Steinberg WRT ¶ 12 ("The period covered by Web IV is the relevant base, and the only cost increases relevant for the current proceedings are those projected to occur after 2020."); *id.* ¶ 14.

373. Finally, "[e]ven if [SoundExchange's] backward-looking assessment were economically relevant, 1998 is not the right starting year." Steinberg WRT ¶ 15. The minimum fee was not $500 per station or channel in 1998—it was $500 per licensee. *Web I*, 67 Fed. Reg. at 45274 ("Each Webcaster, Commercial Broadcaster, and Non-CPB, Non-Commercial Broadcaster licensed to make eligible digital transmissions and/or ephemeral recordings pursuant to licenses under 17 U.S.C. 114(f) and/ or 17 U.S.C. 112(e) shall pay a minimum fee of $500 for each calendar year, or part thereof, in which it makes such transmissions or recordings."); Steinberg WRT ¶ 15. Under that structure, Pandora, iHeart, Google, and SiriusXM all would pay $500 instead of much more. Inflation simply is not the right metric by which to gauge SoundExchange's estimated incremental processing costs for the upcoming term.

v. Doubling the Minimum Fee Is Inconsistent With The 2021-2025 CBI Agreement

374. SoundExchange's minimum fee proposal also is contradicted by its own agreement to charge certain licensees fees that are much lower than $1,000 and that also cover webcasting transmissions up to 159,140 monthly ATH. TX 3019 at 7 (SoundExchange-College Broadcasters, Inc. ("CBI") Agreement for 2021-2025) (charging fees increasing from $550 to $750 over license term); *see also* Steinberg WRT ¶ 16. Even those lower fees are much higher than the minimum fees that would be negotiated in an effectively competitive market, as CBI experienced greater opportunity cost savings by exiting litigation. CBI's litigation costs

decreased from 100% to 0% (and related stations paid about $337,000 in royalties), so the incentive to exit litigation was high. Steinberg WDT ¶ 31. By contrast, SoundExchange still was required to litigate against not only commercial, but noncommercial webcasters, so it experienced only modest marginal litigation cost savings at best. *Id.* This indicates that in a market reflecting effective competition, the minimum fees would be lower than the CBI agreement specifies. Steinberg WDT ¶ 31.

375. Mr. Ploeger attempts to dismiss the lower CBI fees by asserting that SoundExchange's processing costs are lower for CBI stations because stations webcasting at or below 80,000 monthly ATH may waive reporting requirements by paying an additional $100 proxy fee. Ploeger WRT ¶ 15. But according to SoundExchange's own reporting data, there are literally [redacted] noncommercial stations or channels that also webcast at or below that level, and SoundExchange easily could agree to waive reporting requirements for them as well, which Mr. Ploeger acknowledged would lower SoundExchange's processing costs. *See* TX 3038; 9/9/20 Tr. 5855:24-5856:9 (Ploeger).

CONCLUSION

For the foregoing reasons and those set forth in the Services' individual proposed findings, the Judges should reject SoundExchange's Proposed Rates and Terms.

Dated: October 8, 2020

Respectfully submitted,

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ATTACHMENT A:

Exhibits Admitted or Offered Into Evidence
Subject to Qualification and/or Pending Objections

Trial Exhibit	Judges' Ruling	Transcript Citation
5469	Decision on admission reserved; Services' pending objections preserved and on the record.	9/2/20 Tr. 5261:13-23 (Piibe)
5413	Decision on admission reserved; Services' pending objections preserved and on the record.	9/3/20 Tr. 5651:25-5652:11 (Harrison)
1029	Decision on admission deferred; SoundExchange's pending objections preserved and on the record.	9/9/2020 Tr. 6047:7-11 (housekeeping)
1030	Decision on admission deferred; SoundExchange's pending objections preserved and on the record.	9/9/2020 Tr. 6047:7-11 (housekeeping)
5152	Admitted, subject to the limitation that Professor Willig's testimony about the exhibit be hewed to his written direct and rebuttal testimony, and not go beyond it or include new testimony.	8/5/20 Tr. 456:22-466:6 (Willig)
2039	Admitted subject to SoundExchange's preserved objections; use of exhibit limited to illustrate what was relied on by Dr. Leonard.	9/9/20 Tr. 6050:13-6051:7 (housekeeping)

Proof of Delivery

I hereby certify that on Monday, October 12, 2020, I provided a true and correct copy of the Services' Joint Unopposed Motion for Leave to File Corrected Public Version of Proposed Findings of Fact and Conclusions of Law to the following:

Jagjaguwar Inc., represented by David A. Handzo, served via ESERVICE at dhandzo@jenner.com

SAG-AFTRA, represented by David A. Handzo, served via ESERVICE at dhandzo@jenner.com

American Federation of Musicians of the United States and Canada, The, represented by David A. Handzo, served via ESERVICE at dhandzo@jenner.com

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